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2008

Cragsmoor Consultants

**PHASE IB ARCHAEOLOGICAL SURVEY
NATIONAL LIGHTHOUSE REDEVELOPMENT PROJECT
BLOCK 1, PORTION OF LOT 60
STATEN ISLAND
BOROUGH AND COUNTY OF RICHMOND
NEW YORK CITY
SEQRA - R**

April 2008

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I. INTRODUCTION

In July 2007, Cragmoor Consultants submitted a Phase Ia archaeological survey report to Philip Habib & Associates (Pickman and Harris 2007) for the site of the National Lighthouse Redevelopment Project, located in the St. George area of the County and Borough of Richmond (Staten Island), New York (see Figure 1). The report was prepared at the request of the New York City Landmarks Preservation Commission (NYCLPC). Originally a part of the Staten Island Quarantine Ground, the site was first developed as a station for the Revenue Marine Service after 1815 and was utilized by this agency until 1863. After sharing the site with the Revenue Marine Service for some four years, the U.S. Light-House Board took over the entire site in 1866, utilizing a few of the former Revenue Marine structures and constructing numerous additional buildings on the site in the ensuing years. The activities of the U.S. Light-House Board - maintaining and supplying lighthouses and light ships - were vital functions as these facilities were necessary elements in maintaining maritime commerce with nineteenth century technology, and these functions continued to be vital in the early years of the twentieth century. The Phase Ia report also noted the site's potential significance due to its association with Joseph Henry, a major figure in the history of American contributions to science.

A portion of the site is listed on the National Register of Historic Places. The National Register nomination cites, in particular the fact that the Depot is "historically significant for the role played in the development of lighthouse technology in the United States."

The present project site encompasses approximately three acres of the five acre Light-House Depot. The southwestern portion of the Depot is now the site of a United States Post office, constructed in the 1930's, and the northeastern portion is the location of the Staten Island Ferry Maintenance Facility, constructed in the 1990's (see Figure 2).

The Phase Ia archaeological report included a map overlay, included here as Figure 3, showing the approximate locations of the Revenue Marine Station and Light-House Depot buildings on a recent site plan. The overlay is based on an analysis of nineteenth and twentieth century maps, photographs and drawings. Six of these buildings still stand. Four (see Figures 2 and 3 - buildings 5 - 8) were constructed ca. 1860's - 1880's and are specifically cited in the National Register Nomination. Building 7 is also a designated New York City Landmark. The other two standing structures (buildings 10 and 11) were constructed during the first two decades of the twentieth century.

The site plan for the National Lighthouse Redevelopment Project is shown as Figure 4. The project will result in major impacts to most portions of the site, resulting from construction of three condominium buildings and associated amenities; renovation of the existing buildings to be used for commercial purposes as well as a museum facility; and improvements in public recreational facilities.

The Phase Ia archaeological study noted the possibility that significant archaeological remains associated with the operation of the Light-House Depot as well as the earlier

Revenue Marine Station could remain intact in three portions of the project's area of potential effect (APE); the northwestern and central areas, and the Plaza located in the southeastern portion of the site (see Figure 5). Archaeological field testing was recommended in these areas

After reviewing the Phase Ia report, the New York City Landmarks Preservation Commission concurred with the study recommendations and requested the submission of a scope of work for Phase Ib archaeological field testing for its review and approval. The subsequently approved testing plan (Pickman 2007) included the southeastern portion of the project site, referenced as the "Plaza Area" (see Figure 5). Further discussions with project personnel, however, indicated that this portion of the site would remain the property of New York City, and that no construction would occur here until some future time. Phase Ib testing was therefore not conducted in the Plaza area, and this report does not include an assessment of the presence or absence of the potentially significant archaeological resources in this portion of the site that were discussed in the Phase Ia report.

A. Field Testing Objectives

The overall objective of the Phase Ib archaeological testing has been to determine the presence or absence of possibly significant archaeological resources associated with several of the structures constructed in the northwestern and central portions of the site during the nineteenth century.

1. Northwestern Portion of the Site

The analysis included in the Phase Ia report indicated the possibility that significant deposits in the form of domestic refuse could remain in the vicinity of the former location of Building 1 (see Figure 3). This was a domestic structure built between 1815 and 1845 that served as the home of Revenue Marine officers. After the site was acquired by the Light-House Board in 1863, the house initially served as the residence of the Light-House Engineer and after ca. 1870 it became the home of a succession of naval officers who served as the Inspector of the Third Light-House District. Census records indicate that the Inspectors occupied this house with their families and domestic servants. Analysis of maps and photographs suggests that although the structure was modified and additions made after it was acquired by the Light-House Board, the original house may have served as the core of the modified structure. The building continued to stand until the major demolition of structures on the site during the 1990's.

During a 2003 reconnaissance of the site (see Pickman and Harris 2004), a portion of what appeared to be a foundation wall constructed of stone set in mortar was noted at the approximate location of Building 1 as shown on the various historic period maps. More recent grading of this portion of the site to create a parking area has, however, removed the visible traces of this foundation wall. One objective of the Phase Ib testing was to determine whether there are subsurface remains of the Building 1 foundation. The major objective was to determine whether there are any remains of shaft features or surface

middens associated with this building. Deposits of domestic artifacts and other refuse within such features could provide insight into the daily lives of the occupants of the Inspectors' house.

As depicted on the various maps and photographs included in the Phase Ia report, this building faced New York Bay. It is considered that the most likely location of shaft features would be to the rear (westward) of the house. While surface middens could have been present, it is considered that any such deposits would most likely have been removed by subsequent surface disturbance discussed in the Phase Ia report. Nevertheless, prior to conducting backhoe trenching on the site, limited shovel testing was conducted to determine site stratigraphy, and to confirm that there are no remaining intact midden deposits in the area.

2. Central Portion of the Site

This portion of the site includes the vicinity of the standing structures cited in the National Register nomination. These include the Laboratory (Building 5), Storehouse (Building 6), Office (Building 7), and Work Shop (Building 8), as well as the semi-subterranean Oil Vaults (Building 9) (see Figures 2 and 3). Building 6 was constructed in 1864, and buildings 7 - 9 ca. 1868 - 1870. Building 5 was a later addition, built in 1882. The Phase Ia analysis indicated the possibility that archaeological deposits could be present in the vicinity of these structures, in particular in the strip of land at the rear of these buildings (between the buildings and the steep bank that separates the central and western portions of the site), as well as in the courtyard areas between the buildings.

Deposits associated with these buildings could represent refuse deposited by the workers. In addition, refuse associated with the work conducted (lamp glass, scrap metal etc.) could also be present and could provide additional information on technology utilized - such deposits would most likely be associated with the Work Shop building (Building 8), which also housed the Depot's laboratory prior to construction of Building 5.

The construction of subsurface features associated with these buildings has been documented in the annual reports of the Light-House Board. These reports mention a "cesspool" in the vicinity of the Work Shop building (Building 8), as well as cisterns associated with this structure, the oil vaults and other buildings. These features would have been utilized prior to the availability of a public water supply at the start of the 1880's. Refuse present in and around these buildings could have been deposited in these features at this time.

The previous analysis indicates that the presence of surficial refuse in this portion of the site is unlikely with the exception of one area at the rear of Building 8. The 1873 Light-House Board annual report notes that "the grounds in front and rear of the lamp shop and near the north gate have been graded and partly laid in grass" and that "flagging has been laid from the gate at the south entrance along the front of the shop, office and store house nearly to the north gate, on the end of each of the buildings and hence to the oil vaults." The flagstone pavements have since been replaced with asphalt or concrete slabs.

However, there is an area to the rear of the work shop (i.e. the lamp shop - Building 8) that is not paved. This strip extends from the end of the paved area immediately adjacent to the building for approximately 15 feet westward to the base of the bank. Although this area is not clearly visible in an 1884 photograph, it would also appear to have been unpaved at that time. A number of shovel tests were conducted in this area prior to the backhoe testing.

With the exception of the unpaved area noted above, the remainder of the central portion of the site is covered by either bituminous or concrete slab pavements.

The cisterns associated with the initial construction of these buildings (ca. 1860's) would most likely have been located near the building corners, where they would have been fed by downspouts. Cesspools or privies would most likely be located to the rear of the buildings.

The objective of the planned backhoe trenching in this portion of the site was to detect the presence of such features.

II. ARCHAEOLOGICAL FIELD TESTING

A. Manual Shovel Testing

As specified in the Scope of Work for this project (Pickman 2007), prior to the initiation of backhoe testing, preliminary manual shovel testing was conducted in two portions of the site; the vicinity of Building 1 ("the Inspector's house") and the earthen strip at the rear of Building 8. A total of fourteen preliminary shovel tests were conducted on October 29 and 30, 2007. The locations of these tests are shown on Figures 6 and 7. The stratigraphy encountered by each test and the artifacts recovered are listed in Appendix A.

1. Northwestern Portion of the Site - Vicinity of Building 1

Prior to the initiation of testing in this area, we identified in the field the location of the approximate footprint of this building as shown on the historic period maps (see Pickman and Harris 2007). The shovel tests were then located according to the testing plan as specified in the scope of work. The objective was to determine whether there were any midden deposits or other possibly significant buried surficial deposits associated with the occupation of this building. The shovel tests were located at the rear (west) and north of the house site as indicated on the historic period maps. The area south of the house site was considered to have been more disturbed due to twentieth century construction discussed in the Phase Ia report as well as the installation of utilities lines as shown on the site survey.

As noted in the Phase Ia report (Pickman and Harris 2007), since 2004 grading has occurred in northwestern portion of the site to create a gravel-surfaced parking area. This parking area was not shown on the 2000 site survey utilized in the development of the testing plan, but it is indicated on the 2007 site survey (see Figure 6). Five of the planned test locations were within the gravel-surfaced parking area. Two of these (ST 1 and ST 2) were excavated. The sand and gravel that constitutes the parking area surface extends to depths of 10½ - 13 inches below grade, and is underlain by a geotextile sheet, which prevented the continuation of the shovel tests below this depth. A small piece of the geotextile sheet was removed at the base of shovel test 1. Visual inspection of the underlying soil suggested that it most likely represented the glacially deposited subsoil. This was subsequently confirmed by the results of the backhoe trenching (see below). Based on the results of ST 1 and 2, the remaining planned tests within the parking area were not conducted.

With the exception of tests 1 and 2, placed in the gravel-surfaced parking area, the shovel tests excavated in the northwestern portion of the site encountered 7 - 10 inches of recently formed soil containing miscellaneous debris. Beneath these uppermost strata, ST 7 encountered compacted fill containing coal and brick fragments to a depth of 20 inches. The subsequent backhoe trenching indicated that this compacted material was associated with the demolition of Building 1. The test location was relocated 15 feet to the west and excavated as ST 9.

In two tests placed north of the assumed location of the building (ST 6 and ST 8), a stratum of dark brown/gray brown sandy silt was encountered between 9 and 15/16 inches below the present grade. This deposit appeared to represent the remains of a zone of cultivation (e.g. a garden area or plow zone). This stratum yielded mainly pieces of brick and coal/slag and two wire nails. With the exception of shell fragments, a whiteware sherd, and a glass fragment; no domestic artifacts were recovered. This stratum was underlain by a culturally sterile mottled transitional zone and the underlying subsoil deposits, described as yellow/brown or orange/brown sandy or clayey silt.

The remains of the possible zone of cultivation also may be represented by a thin (3 inch thick) layer of mottled black/gray sandy silt encountered in ST 3 at a depth of 20 inches below grade and a four inch thick layer of tan/brown sandy silt at 16 inches below grade in ST 4. As with ST 6 and 8, a few pieces of glass and shell fragments were recovered from these strata, in addition to pieces of coal and brick. As in STs 6 and 8, these strata were also followed by the culturally sterile subsoil.

In ST 5 and ST 9, the possible cultivation zone noted above had apparently been removed or disturbed. The culturally sterile subsoil was encountered at a depth of 22 inches in ST 5 and 14 inches in ST 9.

Shovel testing and visual observation indicated that many portions of the area in the vicinity of Building 1 have undergone significant disturbance. Nevertheless, shovel testing suggested the presence at some locations of what may represent a zone of cultivation associated with the occupation of the building. This stratum, however, included only a few domestic and other artifacts that may derive from the occupation of the building. No midden deposits or other possibly significant buried surficial deposits were detected.

2. Central Portion of the Site - Rear of Building 8

As noted in the scope of work (Pickman 2007), most of the central portion of the site is covered with concrete or bituminous pavement, the exception being an earthen strip at the rear of Building 8. Five shovel tests were excavated in this area to determine whether there are any deposits of artifacts associated with the mid-late nineteenth century utilization of this building as the Light House Depot's lamp shop and laboratory.

The uppermost 5 -10 inches in these shovel tests consisted of brown and gray/brown sandy silt with gravel containing coal/cinder, glass and other debris similar to that noted on the surface in this area.

Below the sandy silt with gravel, shovel test 10 encountered fill placed within a trench for a ceramic pipe oriented in an approximately north-south direction. The pipe was encountered at a depth of 20 inches below grade in this test. Test 12 encountered what appeared to be the same ceramic pipe in the east wall of the test at a depth of 10 inches below the existing surface. In the western portion of test 12, where the pipe trench was

not present. disturbed soil was encountered to a depth of 10 inches, followed by red/brown silty sand representing the culturally sterile subsoil.

Shovel tests 11 and 13 also encountered disturbed soil to depths of 13/14 inches, followed by the red/brown subsoil. Subsequent to the initial excavation of ST 11, this test was extended some 1.5 feet to the west - where the ceramic pipe noted in STs 10 and 12 was encountered at a depth of 12 inches below grade. The pipe at this location appeared to have been broken up due to the presence of large tree roots, one of which appeared to have been growing through the pipe.

The ceramic pipe encountered in STs 10, 11, and 12 most likely served to provide drainage to Building 8 and appeared to slope downward from south to north.

An additional test (ST 14) was excavated in a portion of the earthen-surfaced area located north of the remains of the one-story brick "engine house" at the rear of the northern portion of Building 8. Beneath the uppermost gravelly strata, the test encountered mixed soil types containing large rocks, which prevented excavation beneath a depth of 25 inches. The test location apparently encountered a utilities trench or some other disturbance. This area was investigated further during the backhoe trenching (see below).

Shovel testing in the earthen surfaced area at the rear of Building 8 did not encounter any deposits associated with the nineteenth century use of the building. It would appear that any former surfaces that may have included such deposits have been removed by subsequent disturbance.

B. Backhoe Trenching

Because of the presence of utilities on the site, including electrical, water and gas lines, safety considerations required that the location of these lines be identified by remote sensing and marked out on the ground by contractors employed by the property owners prior to the conduct of backhoe trenching. The archaeological backhoe trenching was subsequently conducted on March 31 and April 1 - 2, 2008. The locations of the backhoe trenches are shown on Figures 8 and 9, which also indicate the identified utilities lines. The locations of the backhoe trenches as indicated on the testing plan (Pickman 2007) were necessarily adjusted in the field to avoid the marked locations of the electrical, water and gas lines.

1. Northwestern Portion of the Site - Vicinity of Building 1 (see Figure 8)

a. Backhoe Trenches 1 and 2 and Walls 1 - 4

The objective of the initial backhoe trenching in this area was to determine whether there are any intact portions of the Building 1 foundation and to determine the location of its rear wall.

Backhoe trench 1 was located at the approximate north-south midpoint of the Building 1 footprint as indicated by examination of the nineteenth and early twentieth century maps. The southern end of this trench encountered two intersecting brick walls (wall 1 and wall 2) with concrete mortar/cement caps (see Photographs 1 - 3). Wall 1 extends north-south and intersects wall 2, which extends to the east. A brick pillar is located at the northeast corner of the intersection of the two walls. The north side of wall 2 and the east side of wall 1 have a mortar facing (see Photograph 2).

The top of wall 1 was approximately 33 inches below the adjacent surface grade. On its western side the base of this wall has a footing which steps outward, and is adjoined by a basement floor at approximately 52 inches below the adjacent surface grade (Photograph 3). This floor continues to the west for approximately 11 feet from the base of wall 1. West of this point the floor appears to have been removed during demolition of the structure, and was seen to be constructed of a layer of brick covered by mortar (see Photographs 4 and 5).

The deposits exposed in the walls of backhoe trench 1 appear to consist of debris deposited in the cellar hole during the ca. 1990's demolition of Building 1. As shown in Photograph 4 the demolition deposits extend below the elevation of the basement floor that is present in the western portion of the trench.

Since our major testing objective was to determine whether there are intact shaft features west of the house, we conducted only limited examination of the area around the intersection of walls 1 and 2. A second basement floor extends south of wall 2 (see Photograph 1 and 2) at an elevation above that of the floor extending west of wall 1 noted above. We did not expose the area northeast of the intersection of walls 1 and 2. Probing adjacent to the brick pillar (see Photograph 2), however, indicated the presence of another basement floor, approximately 1 foot deeper than the floor noted west of wall 1.

As noted in the Phase Ia report, the various nineteenth and twentieth century maps and photographs examined for that study indicate that prior to its demolition Building 1 consisted of several sections, representing successive additions to and/or reconstructions of the building. It is likely that walls 1 and 2, exposed in BHTR 1 represent the junction of the eastern portion of several sections of the building.

We extended BHTR 1 to the east in order to intersect the rear (western) wall of the foundation. The demolition of the building, however, apparently resulted in the removal of this western foundation wall at the location of the backhoe trench, as well as the western portion of the basement floor, as noted above.

A second east-west oriented backhoe trench (BHTR 2) was excavated north of BHTR 1. This trench encountered a north-south oriented brick wall (wall 3) (see Figure 8 and Photographs 6 and 7). The upper portion of wall 1 was removed by the backhoe where it crossed the trench location, with the remaining portion at 46 inches below grade. The top of this wall as exposed in the wall of the backhoe trench, however, is some 23 inches below grade. A basement floor extends to the east from the base of this wall at a depth of

some 56 inches below grade, a similar depth as the floor exposed in BHTR 1. The floor surface exposed in BHTR 2 consists of mortar/cement, which could possibly overlie a brick floor similar to the one exposed in BHTR 1. Wall 3, as exposed in BHTR 2, is 9 inches thick, compared with the 19 inches thick walls 1 and 2, exposed in BHTR 1.

A second brick wall (wall 4) was visible in the northern wall of BHTR 2 (see Photograph 8), extending east of wall 3. These walls apparently represent the northwestern corner of the northernmost section of Building 1.

The excavation of BHTR 2 indicates that a portion of the rear foundation wall of the northern section of Building 1 is intact. However, the results of BHTR 1 indicate that the demolition of Building 1 apparently resulted in the removal of at least a portion of the rear wall of the central section of the building.

b. Backhoe Trenches West of Building 1

Backhoe trench 3, oriented east-west, was excavated near the location of the western wall of the building footprint as indicated by the historic period maps. While demolition debris was noted in the walls of portions of this trench (see Photograph 9) this debris deposit appeared to be not as thick as that noted above the basement floor within the building footprint. The debris noted in the walls of BHTR 3 apparently represents material deposited adjacent to the building location during demolition. The debris was not present at the southern end of the trench (see Photograph 9). It is considered likely that BHTR 3 is at least partially located immediately west of the location of the rear wall of Building 1 prior to its demolition. No shaft features were noted during the trench excavation.

Five additional backhoe trenches (BHTR 3a - 6) were excavated west of the location of BHTR 3, an area that represents the backyard of Building 1. A determining factor in the location of these trenches was the necessity of assuring that the trenches would not intersect the routes of the electrical, water, and gas lines, as determined by the results of the remote sensing. In general the stratigraphy observed in the walls of these trenches was consistent with the results of the preliminary shovel tests. In the wooded and grassy areas, an average of approximately 12 inches of topsoil and possibly disturbed deposits overlay the reddish/brown clayey silt representing the subsoil (see Photographs 10 - 14). Where the trenches crossed the recently created parking area, the topsoil deposits have been removed, with the subsoil directly underlying the gravel and geotextile fabric deposited to create the parking area. None of the backhoe trenches placed in the backyard area encountered shaft features or deposits of domestic artifacts.

c. Northwestern Portion of the Site - Summary

The backhoe trenches excavated in the northwestern portion of the site indicate that extensive disturbance has occurred here. Some of this disturbance apparently occurred when Building 1 was demolished in the 1990's. More recently, additional disturbance resulted from the grading of a portion of the site for the construction of a parking area. While a portion of the Building 1 foundation and basement floors remain, other portions

have been removed. The backhoe trenching did not encounter any shaft features or any other possibly significant artifact deposits. Artifacts noted within the foundation fill consisted mainly of wood, brick, mortar, concrete and other demolition debris. Few domestic artifacts were noted either within the foundation fill or in the area west of the foundation.

2. Central Portion of the Site (see Figure 9)

a. Building 8 - Backhoe Trench 7 and Feature 1

Backhoe trench 7 was excavated along the length of the earthen strip at the rear of Building 8, as specified in the testing plan. The stratigraphy observed was similar to that noted in the shovel tests; approximately five to ten inches of recently developed soil and disturbed deposits followed by the reddish brown subsoil (Photographs 15 and 16). The ceramic drainage pipe encountered in the shovel tests was also noted in the backhoe trench. A portion of this pipe was removed, with other portions visible in the wall of the trench.

Backhoe trench 7 also encountered the side of small brick shaft feature (Feature 1). The exposed western edge of the feature was located approximately 20 feet west of the rear wall of Building 8 and adjacent to the southwestern corner of the brick "engine house" attached to the rear of Building 8 near its northern end (see Figure 9). As noted in the Phase Ia report (Pickman and Harris 2007:22), this "engine house" was apparently added to the original structure in 1875.

Feature 1 is approximately circular with an inner diameter of some three feet (see Photographs 17). It is constructed of brick set in mortar. The top of this feature was covered by approximately 5 - 10 inches of soil, which was removed by the backhoe to permit recording. Some of the bricks at the top of the western side of the feature were dislodged by the backhoe during its exposure.

The base of the feature as exposed in the wall of BHTR 7 is approximately 4 feet below the uppermost brick of the feature walls. Fourteen layers of brick form the 46 inch deep body of the cylinder with an underlying concrete floor being about one half to two thirds inch thick. Bricks forming Feature 1 and its circular opening are approximately eight by four by two and a half inches in size. A metal pipe was noted on the surface of the feature, but it is uncertain if this pipe is *in situ*. A ceramic pipe was also noted in the wall of BHTR 7 just north of Feature 1 (see Photograph 17). It is also uncertain if this pipe enters the feature.

Feature 1 would appear to be too small to function as a cistern and it probably represents a catch basin or drainage sump, most likely associated with the adjacent engine house. This would be consistent with the presence of the adjacent ceramic pipe, which may have connected with the north-south oriented drainage pipe noted in the shovel tests and in BHTR 7. This pipe may have entered the feature's side or floor east of the portion excavated by Unit A (see below). There was no indication in the remaining portion of the

Feature of an attachment for a covering to the catch basin. It may have been covered by an open grate no longer present.

It is possible that Feature 1 was part of an overall drainage system located west of Building 8. Similar features, connected via ceramic pipes such as those encountered during the fieldwork, may also be present behind Building 8 in the untested areas covered by concrete slabs, as well as elsewhere within the central portion of the site. The system would have collected and subsequently dispersed near-surface water draining into and through the area behind the building. Such systems need a method to collect and concentrate water flow at a location. Catch basins allow pipes coming from different directions and elevations to converge at specific locations and can convert surface flow to sub-surface pipe flow. They also trap larger sediments and debris allowing only drainage with fine sediments to enter pipes. Also, they can provide a drop in elevation on sloping ground and dissipate the energy of pipe flows. Historic period catch basins are commonly constructed of brick, mortar, and concrete and can have a number of lip options ranging from open grates to watertight construction (Marston 1912, Metcalf 1914, Mays 2001).

b. Unit A

To determine whether Feature 1 contained any possibly significant artifact deposits a small excavation unit (Unit A) was placed in the westernmost portion of the Feature (see Photograph 18). The Unit encompassed the westernmost 16 inches of the feature deposits, with the excavated material representing approximately 40% of the deposits within the feature. The stratigraphy encountered by the unit and the artifacts recovered are listed in Appendix A. The profile of the deposits within the feature is shown in Figure 10 and Photographs 19 and 20.

All deposits encountered by Unit A were dug stratigraphically with all excavated soils screened through quarter inch hardware cloth. To facilitate excavation a number of courses of red brick forming the remaining western edge of the feature were removed as Unit A was excavated. All cultural material excavated was saved from each context and placed in plastic bags labeled by provenience for transport to the archaeological laboratory. Recovered artifacts were washed and identified as to period of manufacture and function whenever possible. The Unit datum for the excavation of the feature was established along the top surface of the brick forming the circular opening of the structure at its northwest point. This datum was approximately 10 inches below the adjacent ground surface. Soil deposits within the feature began three inches below the datum (i.e.: top of the feature).

The initial feature deposit encountered in Unit A consisted of six to nine and a half inches of dark gray/black sandy silt with yellow/brown sandy silt mottling and pebbles (Stratum I), extending to between nine and 12.5 inches below the datum. Cultural material recovered from Stratum I consisted of small quantities of oxidized wire nails and miscellaneous pieces of oxidized metal, as well as fragments of bottle glass, flat glass, coal, slag, red brick, cut stone and gray/black slate building materials, mortar/cement,

styrofoam, and plastic. The stratum represents the relatively recent, final filling layer deposited within Feature 1. The soil appears to consist of an organic topsoil deposit mixed/mottled with the locally available yellow/brown sandy silt subsoil. The associated artifacts likely were located on or near the modern ground surface and were incorporated into the soil deposit when the near surface topsoil was acquired to fill the feature.

Beneath Stratum I, at 9 to 12.5 inches below the datum for Feature 1, a second fill layer was encountered, consisting of 16.5 to 18 inches of light gray/brown sandy silt with a limited amount of yellow/brown sandy silt mottling. The deposit was excavated in two levels (Stratum IIa and IIb). Cultural material recovered from both levels was similar, consisting of small quantities of fragmented window, flat, and bottle glass (the latter possibly from a Mason Jar), oxidized wire nails and miscellaneous oxidized metal pieces, fragments of red brick, buff-colored fire brick, mortar/cement, and cut gray/black and red slate building materials, as well as a few pieces of soft shell clam and oyster shell. The soil appears to consist of disturbed near-surface soils mixed with locally available subsoil that was deposited into the feature. The recovered artifacts likely were associated with the near-surface soils that were acquired to fill the feature as Stratum II. Both Strata I and II likely were deposited within Feature 1 contemporaneously or within a relatively short period of time.

Underlying Stratum II, at 27 to 28 inches below the Feature 1 datum, an approximately 16 inch thick deposit of gray/black sand with some silt (Stratum III) was encountered. The layer contained a dense concentration of broken plate/window glass, some pieces having white paint on them, as well as limited quantities of fragmented steel screen/mesh, mortar/cement, oxidized wire nails and miscellaneous oxidized metal pieces, a tin strap, cut gray black and red slate, cut wood, deteriorated leather clothing items, pieces of a white putty/caulking-like substance, and what apparently is a broken white porcelain electric insulator. A single fragment of green/light green and red/brown glazed, buff-bodied earthenware and a few leather fragments were also recovered. Stratum III appears to represent soil that washed into the feature, suggesting it was open or exposed to the elements for a period of time. If this is the case, then the associated artifacts likely were discarded into the feature while its mouth was open, exposing it to the elements. The plate/window glass may have been deposited into the feature as a single, discrete event.

Below Stratum III, at 43 inches below the Feature 1 datum was a three inch thick deposit of coal dust in a black sand matrix with gravel (Stratum IV). The layer's soil also likely washed into the feature, either when it was exposed to the elements or through undetected water pipes leading into the structure. Stratum IV also may be related to Stratum III. Cultural material recovered from Stratum IV consists of fragments of plate/window glass (similar to that recovered from Stratum III), unglazed buff bodied earthenware lid fragments from a crockery container, oxidized metal pieces, an oxidized pipe fragment, pieces of cut wood including a cut twig, and fragments of mortar/cement, bottle glass, slag, and coal/coal dust.

At the bottom of Stratum IV, at 46 inches beneath the Feature datum the concrete floor (Stratum V) of Feature 1 was exposed (see Photograph 19). The floor was not removed as part of the archaeological investigation.

c. Feature 1/ Unit A Summary

Feature 1 most likely functioned as a catch basin within a drainage system associated with Building 8. The Feature's date of construction is uncertain but it may have been contemporaneous with the construction of the engine house. The deposits within Unit A, however, including the large quantity of window glass, most likely represent structural debris deriving from the building and/or the attached engine house - most likely deposited after the site was abandoned ca. 1960's - 1980's. Artifacts in the lower portion of the Feature (Strata III and IV) may have been deposited while the feature was open, with the surrounding soil matrices washing into the feature. Subsequently additional soil (Strata I and II) was deposited to fill in the remainder of the open feature. This may have occurred during the episode of demolition on the site ca. 1990's. The debris included with these strata would have been deposited with the fill. The small amount of domestic artifacts and shell fragments included in the feature deposits may have been present on the surface and deposited with the building debris. The deposits within Feature A do not appear to be associated with the occupation of Building 8 during the period of operation of the Light-House Depot.

d. Building 8 - Backhoe Trench 7a

BHTR 7a (see Photograph 21) was extended east of the northern end of BHTR 7 to examine the deposit of rocks encountered by preliminary shovel test 14. These rocks turned out to represent fill deposited in a trench excavated to install a metal pipe that crossed the route of the backhoe trench. BHTR 7a was extended to intersect the western wall of Building 8 approximately 3½ feet south of its northwestern corner. No features were encountered here. We attempted to excavate a second trench north of the northwestern corner of the building to further examine this area. However, the backhoe was unable to break through the concrete surface in this area.

e. Building 8 - Backhoe Trenches 8 - 10

As noted above, the testing plan included placing backhoe trenches near the corners of buildings 6 and 8, considered to represent areas where the remains of cisterns may be located. As noted in the scope of work (Pickman 2007), however, "completion of this trenching assumes the feasibility of removing the concrete slab pavements with the backhoe." In fact, removal of the concrete slabs proved to be difficult. Where seams between the concrete slabs could be located, however, it was possible in most cases to lift the slab or break off a portion to permit trenching beneath the slab. Trenches were excavated at or near the southwest (BHTR 8 - see Photograph 22), southeast (BHTR 9 - see Photograph 23) and northeast (BHTR 10- see Photograph 24) corners of Building 8. Beneath the concrete slab pavement and the associated bedding material these backhoe trenches encountered the reddish brown subsoil and/or disturbed fill material associated

with the construction of the building. No indications of shaft features or other artifact deposits were noted.

f. Building 6 - Backhoe Trenches 11 - 12

Backhoe Trench 11 was excavated at the northwestern corner of Building 6. The site survey indicates an L-shaped feature at this location which represents rows of bricks visible on the surface between the adjacent concrete slabs. By removing some of these bricks the backhoe was able to lift and break off a portion of one of these slabs. The results of the backhoe trenching indicated that the bricks visible on the surface represent the remaining portion of two intersecting brick walls, constructed on a concrete footing (see Photographs 25 and 26), with the top of the approximately 3½ inch thick footing at a depth of 19½ inches below the adjacent concrete slab surface. The brick walls were exposed in the east and south walls of the backhoe trench. The location of these walls corresponds with a one-story store house shown on maps beginning in 1887 (see Pickman and Harris 2007). The reddish brown subsoil was encountered beneath the concrete footings. In the north wall of the backhoe trench the subsoil was present immediately beneath the concrete slab pavement and its cinder bedding (see Photograph 25). There were no indications of any shaft features in the area exposed by the backhoe trench.

Backhoe trench 12 was located at the southeastern corner of Building 6 (Photograph 27). The results of this trench were similar to those noted for the backhoe trenches excavated at the corners of Building 8. The subsoil was encountered beneath the concrete slab and the cinder bedding. No shaft features were noted.

g. Southwest and Northeast Corners of Building 6

The results of the remote sensing indicated the presence of an electrical line at the southwest corner of Building 6, as shown on the site survey (see Figure 9). Consequently we did not attempt to place a backhoe trench in this area.

An electrical line is also indicated a short distance south of the northeast corner of Building 6. We attempted to place a backhoe trench north and west of the corner. However, the backhoe was unable to lift the concrete slabs in this area.

h. Courtyard Between Buildings 7 and 8

As discussed in the Phase Ia report (Pickman and Harris 2007) and the field testing scope-of-work (Pickman 2007) a 2000 site survey (Elken 2000) indicates the presence of a large (approximately 20 x 25 feet) "cistern" in the courtyard area between buildings 6 and 7. The feature is not shown, however, on the more recent site survey (see Figure 9). Although it was considered likely that this feature would date to the period of the expansion of building 7 at the beginning of the twentieth century, the testing plan included the excavation of a backhoe trench to examine this feature. Attempts to excavate this trench were unsuccessful, however. Removal of the existing asphalt surface in this area exposed an underlying concrete surface (see Photograph 28). Unlike the smaller

concrete slabs noted above, this area appeared to be covered by a single large slab which could neither be removed nor broken up by the backhoe.

III. CONCLUSIONS AND RECOMMENDATIONS

Phase Ib archaeological field investigations have been conducted in the northwestern and central portions of the National Lighthouse Redevelopment Project site. Both preliminary shovel testing and subsequent backhoe trenching were conducted in accordance with the scope of work previously submitted to and approved by the New York City Landmarks Preservation Commission. Some modifications to the testing plan were made in the field according to conditions encountered. These included the need to avoid existing utilities lines and the difficulty in removing concrete pavement at several locations in the central portion of the site.

Field testing in the northwestern portion of the site encountered remains of portions of brick foundation walls and basement floors at the location of the structure referenced as Building 1. Demolition of the structure and subsequent grading of the area have resulted in removal of other portions of these building remains. The remaining portions are not considered to represent significant cultural remains. Testing in the backyard area associated with this structure did not encounter any shaft features or possibly significant artifact deposits.

In the central portion of the site, field testing encountered one small shaft feature located west of Building 8, which apparently functioned as a drainage system/catch basin. The deposits within this feature were sampled and found to consist largely of building-related artifacts, including a large quantity of window glass, apparently deriving from the deterioration of the adjacent structure and demolition activities on the site. These deposits are not considered to represent a significant archaeological resource. No other shaft features or other possibly significant archaeological resources were encountered in this part of the site.

The results of the Phase IB field investigations did not indicate the presence of any possibly significant archaeological remains, and no further archaeological investigations are recommended in the portions of the site examined.

Archaeological field testing in the portion of the site referenced as the Plaza Area, included in the scope of work, was not conducted as part of this project, as there are no definite construction plans at present for this portion of the site.

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Pickman, Arnold and Wendy E. Harris

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2007 Phase IA Archaeological Survey, National Lighthouse Redevelopment Project, Block 1, Portion of Lot 60, Staten Island, Borough and County of Richmond New York City. Report Prepared for Philip Habib & Associates by Cragmoor Consultants, July 2007.

United States Geological Survey

1981 New Jersey, Jersey City Quadrangle. 7½' Series.

FIGURES

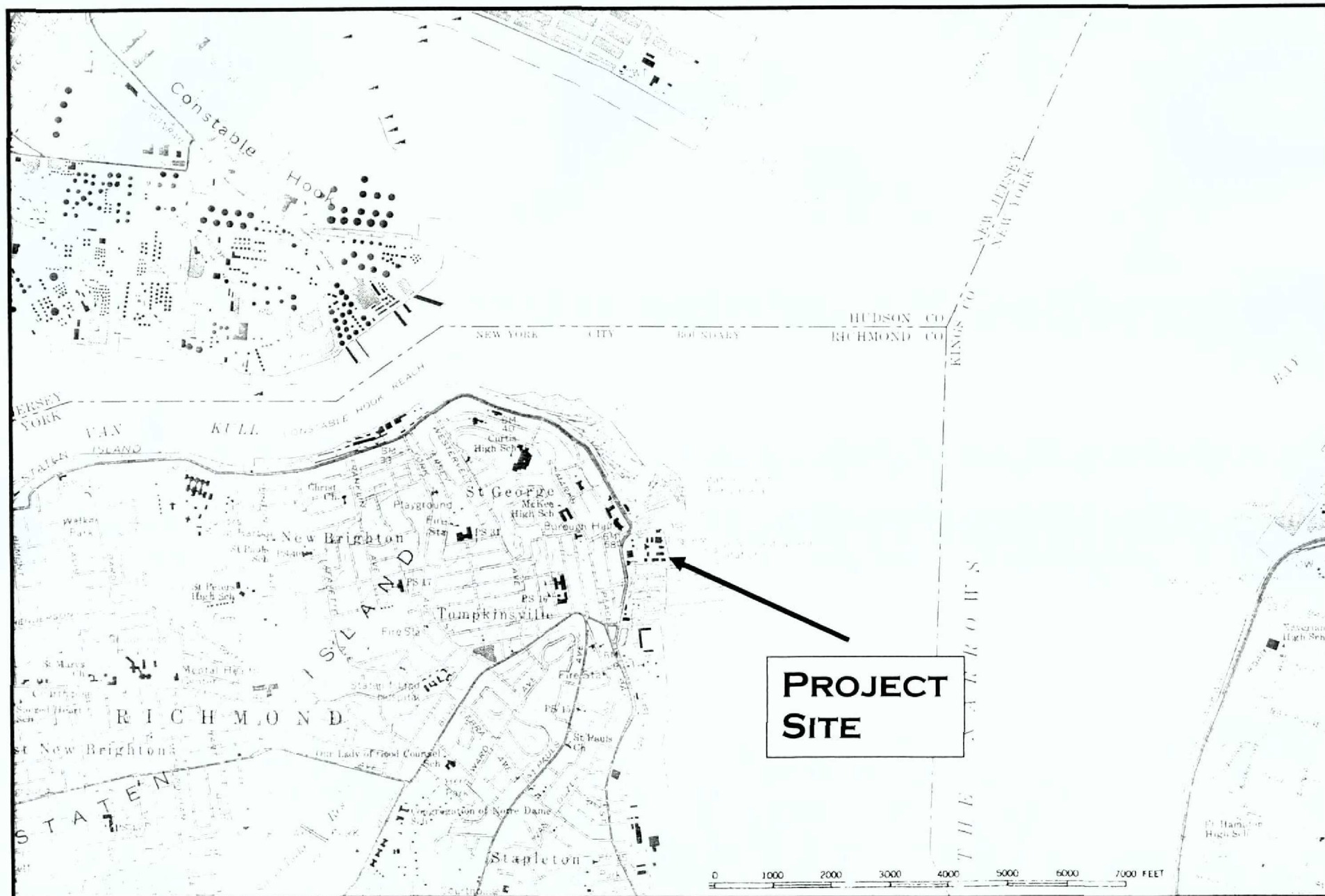


Figure 1
 Site Location
 Base Map: USGS Jersey City Quadrangle (1981)

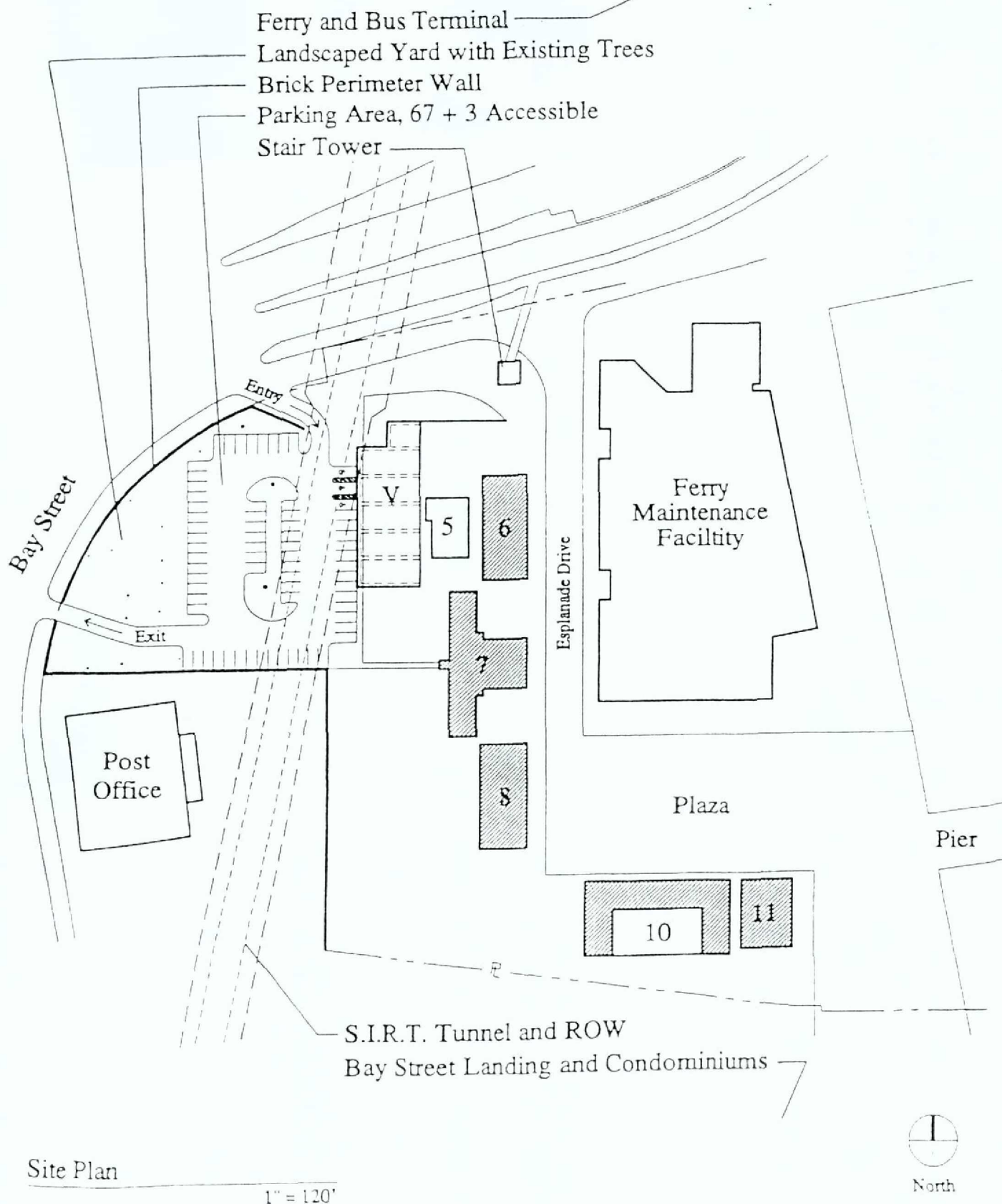


Figure 2
 1999 Plan Showing Existing Buildings and Location of Post Office and Maintenance Facility

National Lighthouse Harbor Site
South Island, New York

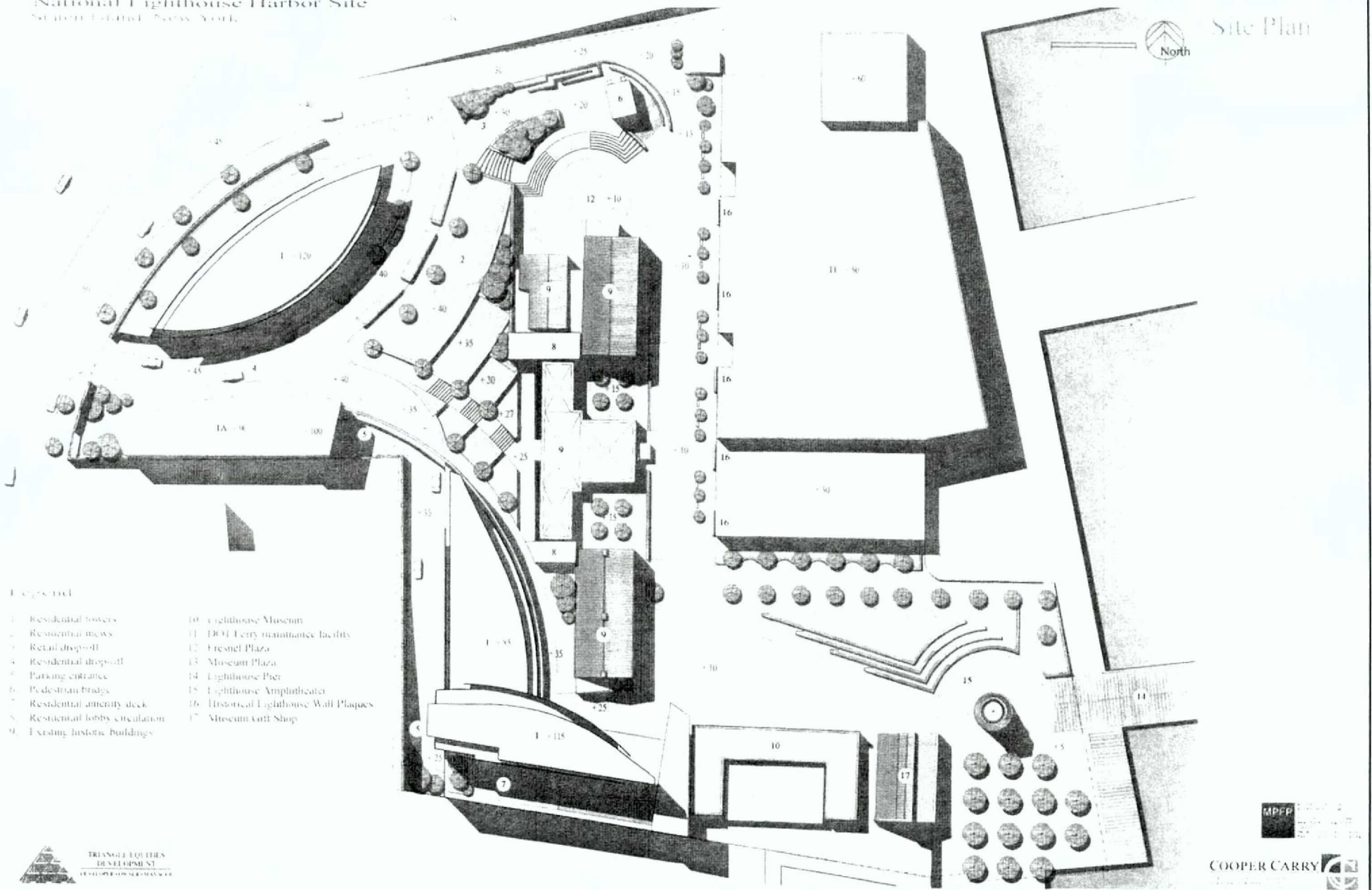


Figure 4
2007 National Lighthouse Redevelopment Project Site Plan

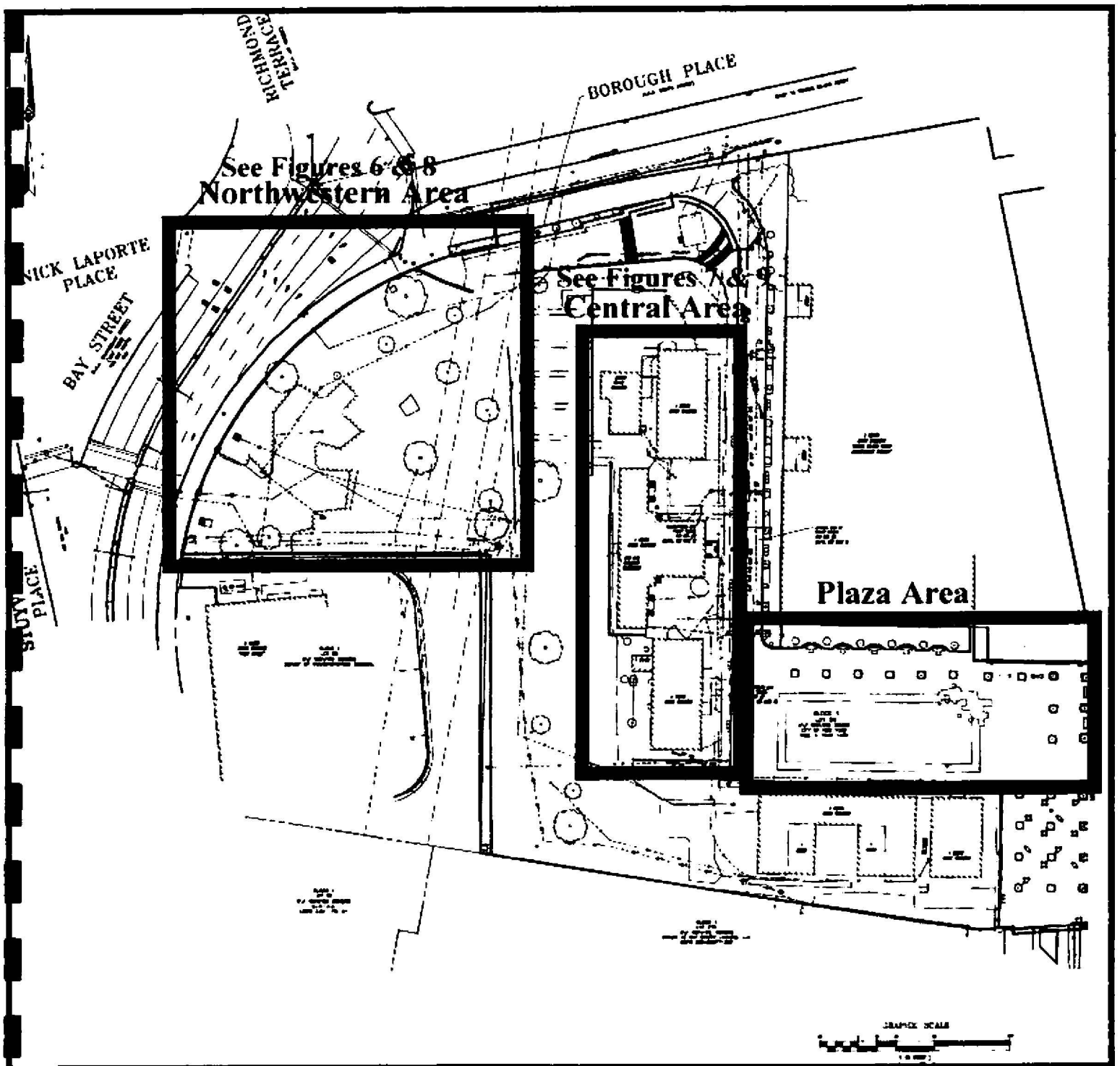


Figure 5
Site Survey With Utilities Locations - Showing Areas Investigated and Plaza Area
Base Map: Control Point Associates, Inc. (2008)

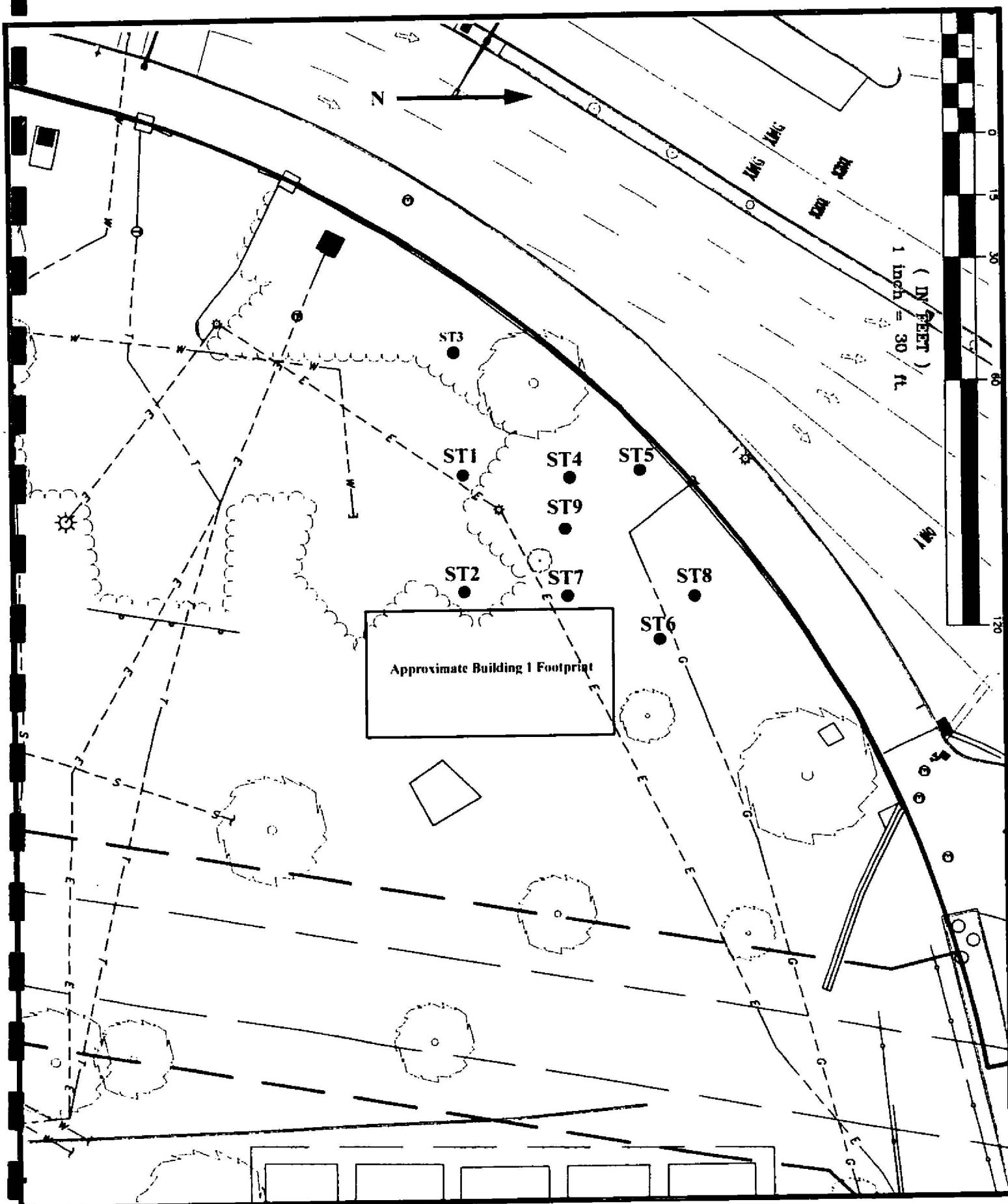


Figure 6
Northwestern Portion of Site Showing Location of Preliminary Shovel Tests
Base Map: Control Point Associates, Inc. (2008)

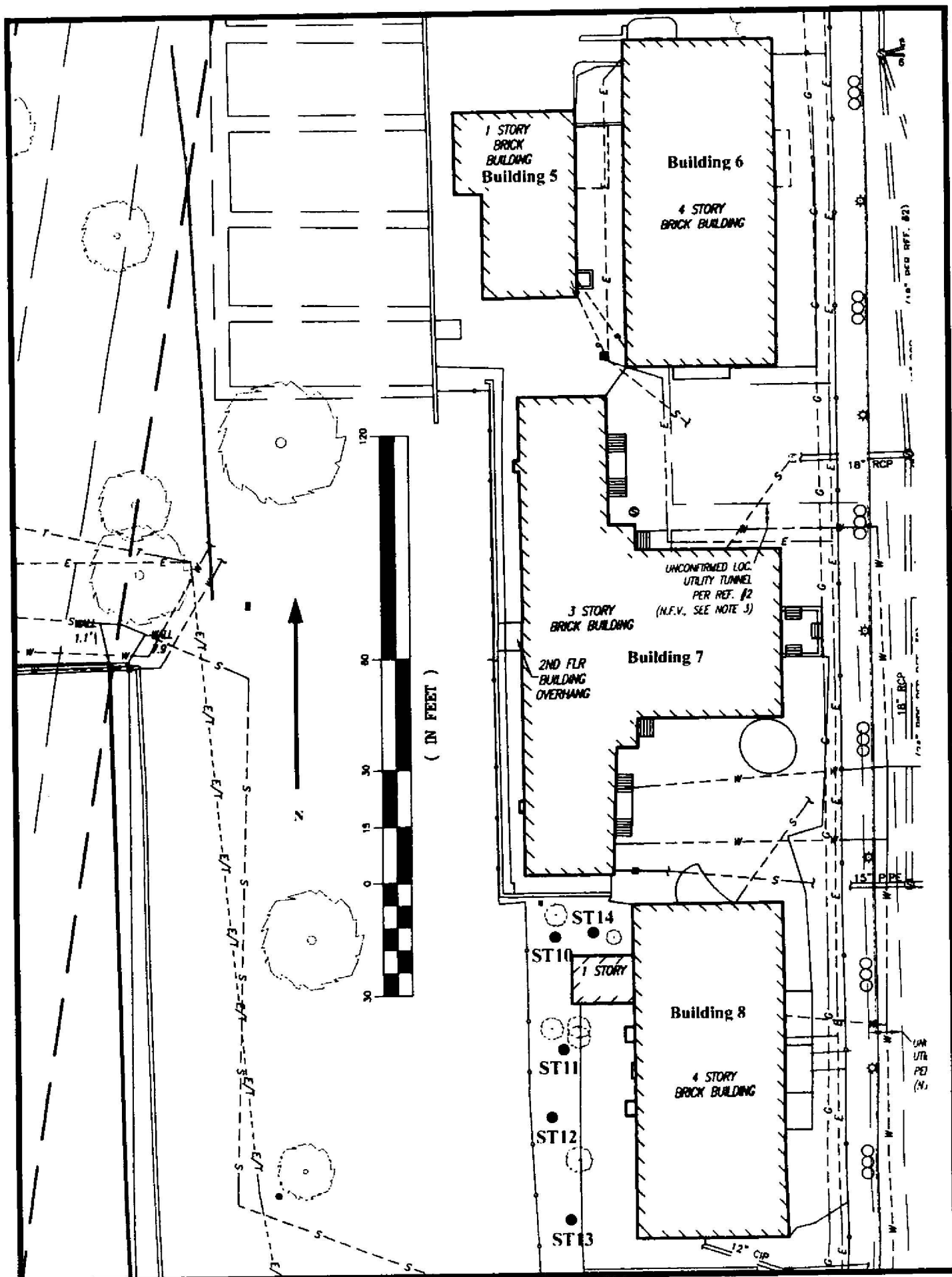


Figure 7
Central Portion of Site Showing Location of Preliminary Shovel Tests

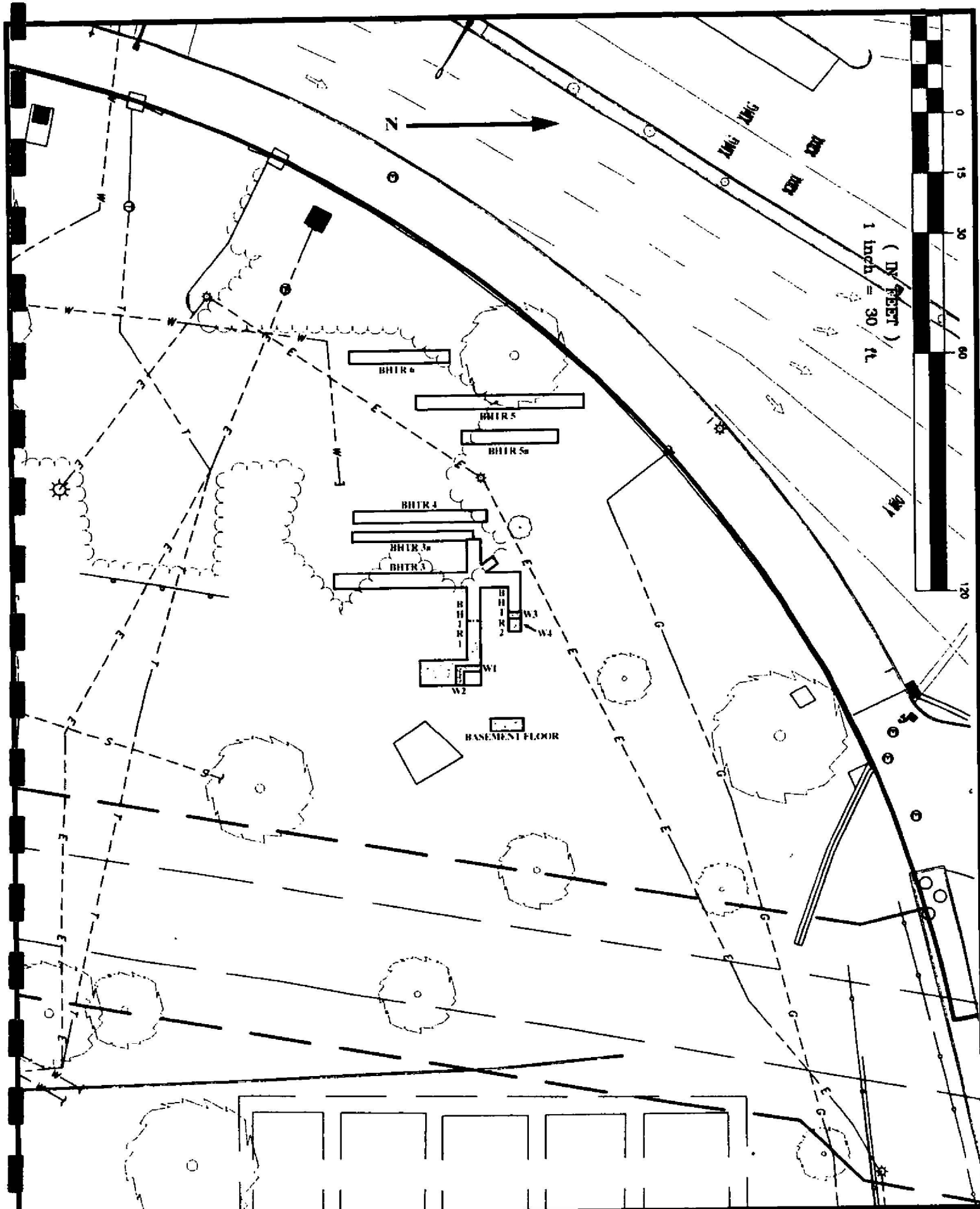


Figure 8
Northwestern Portion of Site - Location of Backhoe Trenches

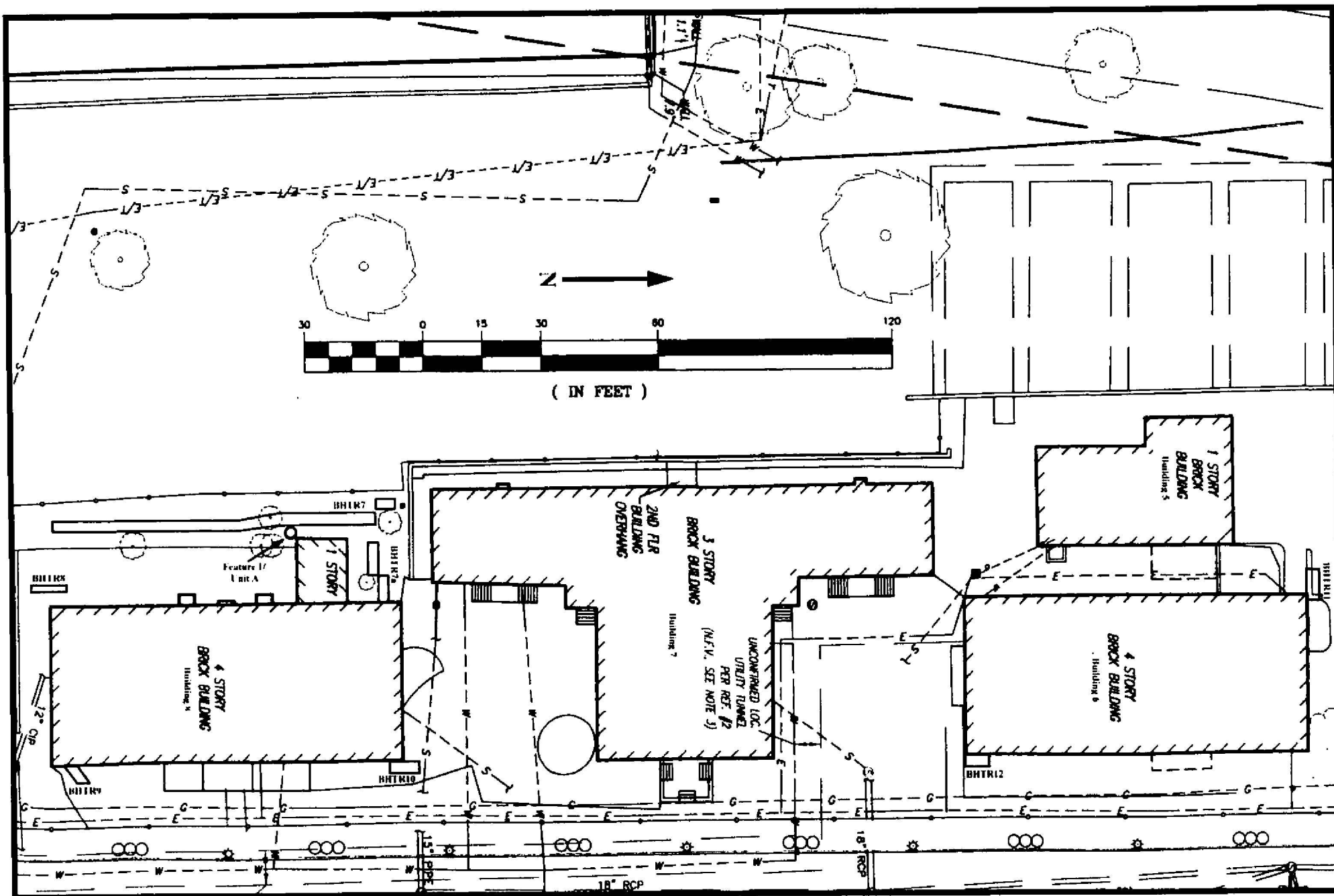
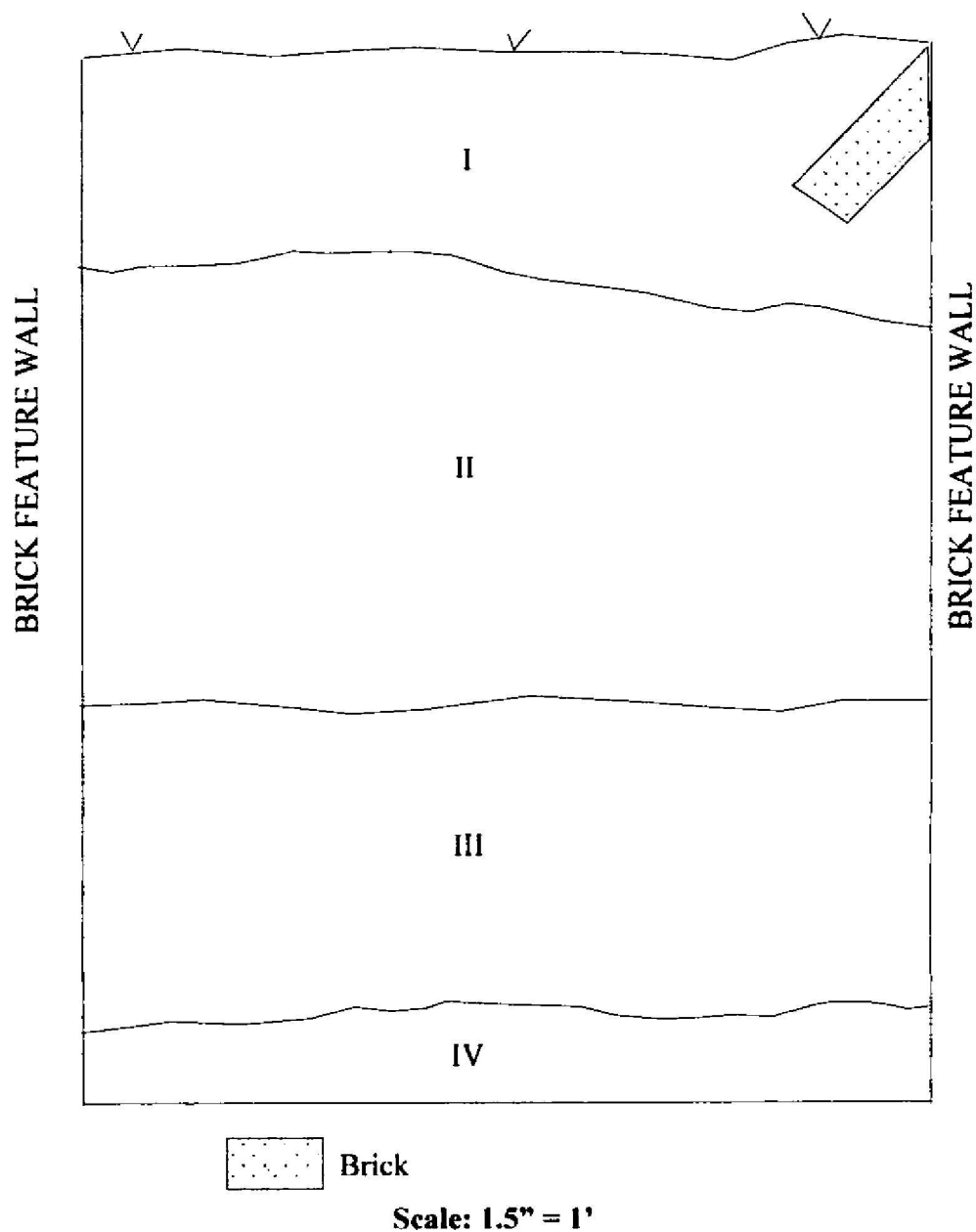


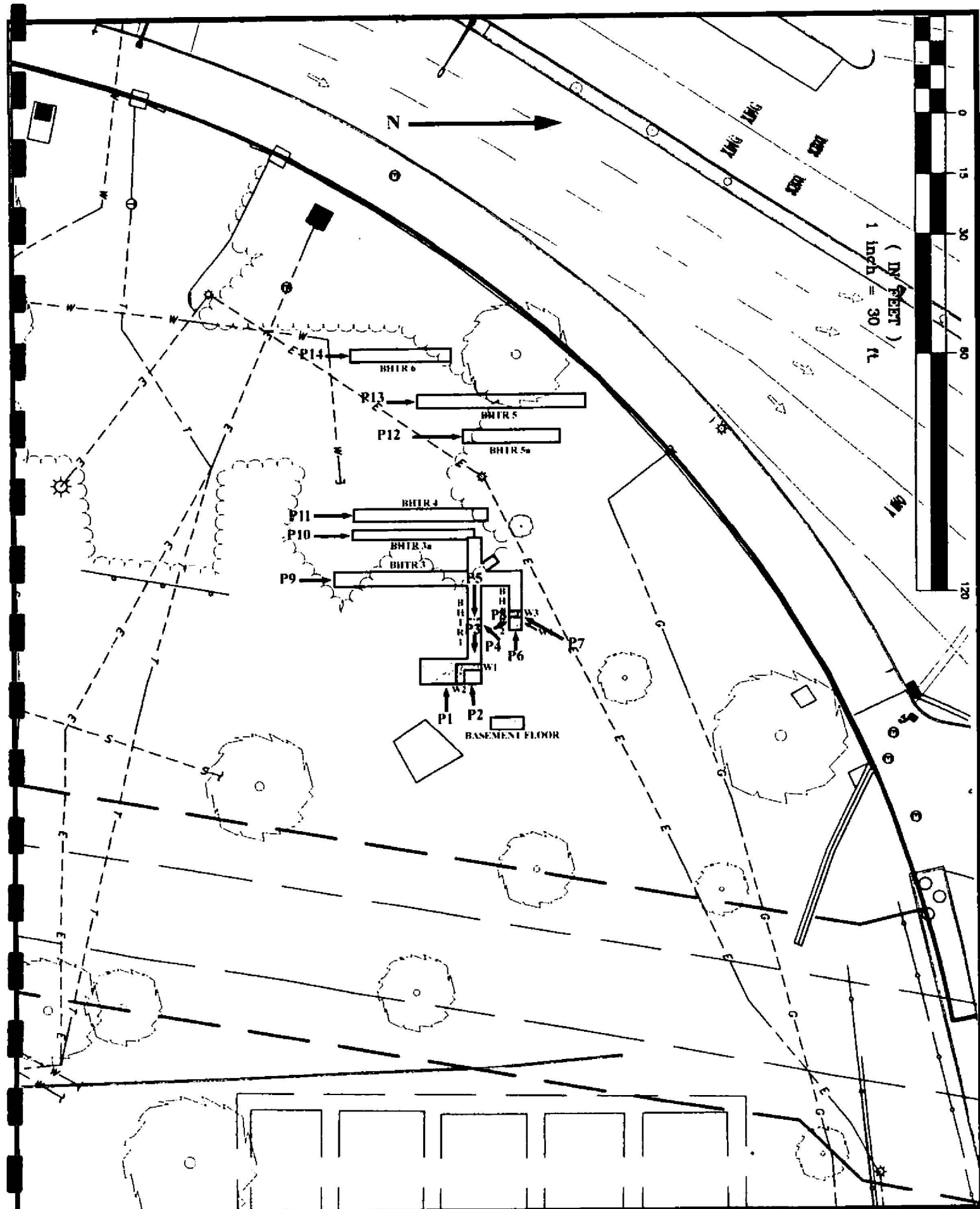
Figure 9
Central Portion of Site - Location of Backhoe Trenches and Feature
Base Map: Control Point Associates, Inc. (2008)

Figure 10
Feature 1 - Unit A East Wall
Profile of Feature Deposits

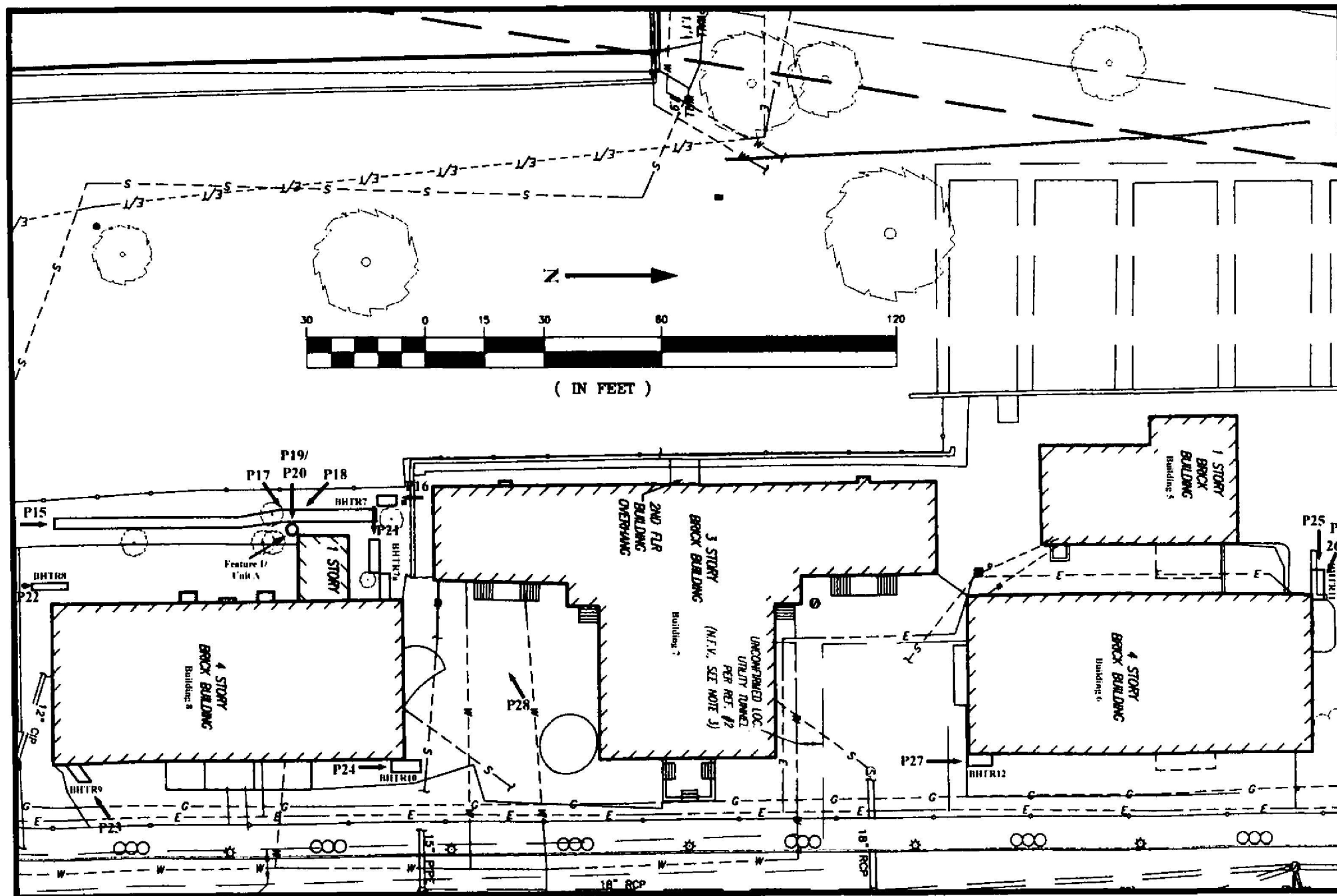


- I - Dark Gray/Black Sandy Silt with Yellow/Brown Mottling and Pebbles**
- II - Light Gray/Brown Sandy Silt with some Yellow/Brown Mottling**
- III - Gray/Brown Sand with Some Silt**
- IV - Black Sandy Matrix with Coal Dust and Small Coal Fragments**

PHOTOGRAPHS



Photograph Locations - Northwest Portion of Site



Photograph Locations - Central Portion of Site



Photograph 1
Backhoe Trench 1 - Showing Intersection of Walls 1 and 2 and Adjacent Floors
View West



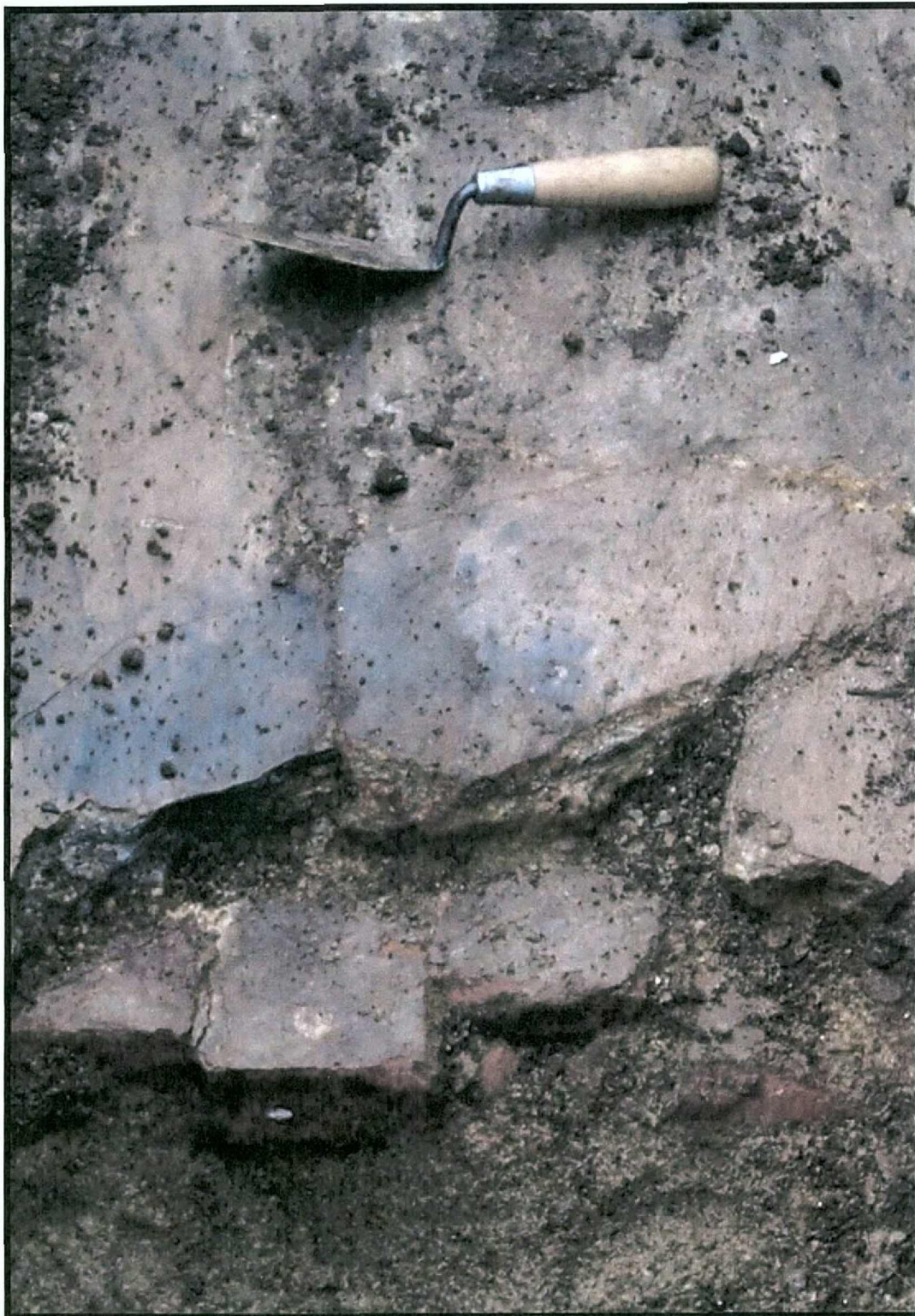
Photograph 2
Backhoe Trench 1 - East Side of Wall 1 with Mortar Facing and Pillar
View West



Photograph 3
Backhoe Trench 1 - Detail of East Side Wall 1 and Adjacent Floor
View East



Photograph 4
Backhoe Trench 1 - Cellar Fill Above Brick/Mortar Floor
Showing Removal of Floor By Demolition With Fill and Subsoil at Right Below Brick/Mortar Floor Level
View South



Photograph 5

**Backhoe Trench 1 - Detail of Brick/Mortar Basement Floor at Point Where Removed By Demolition
View East**



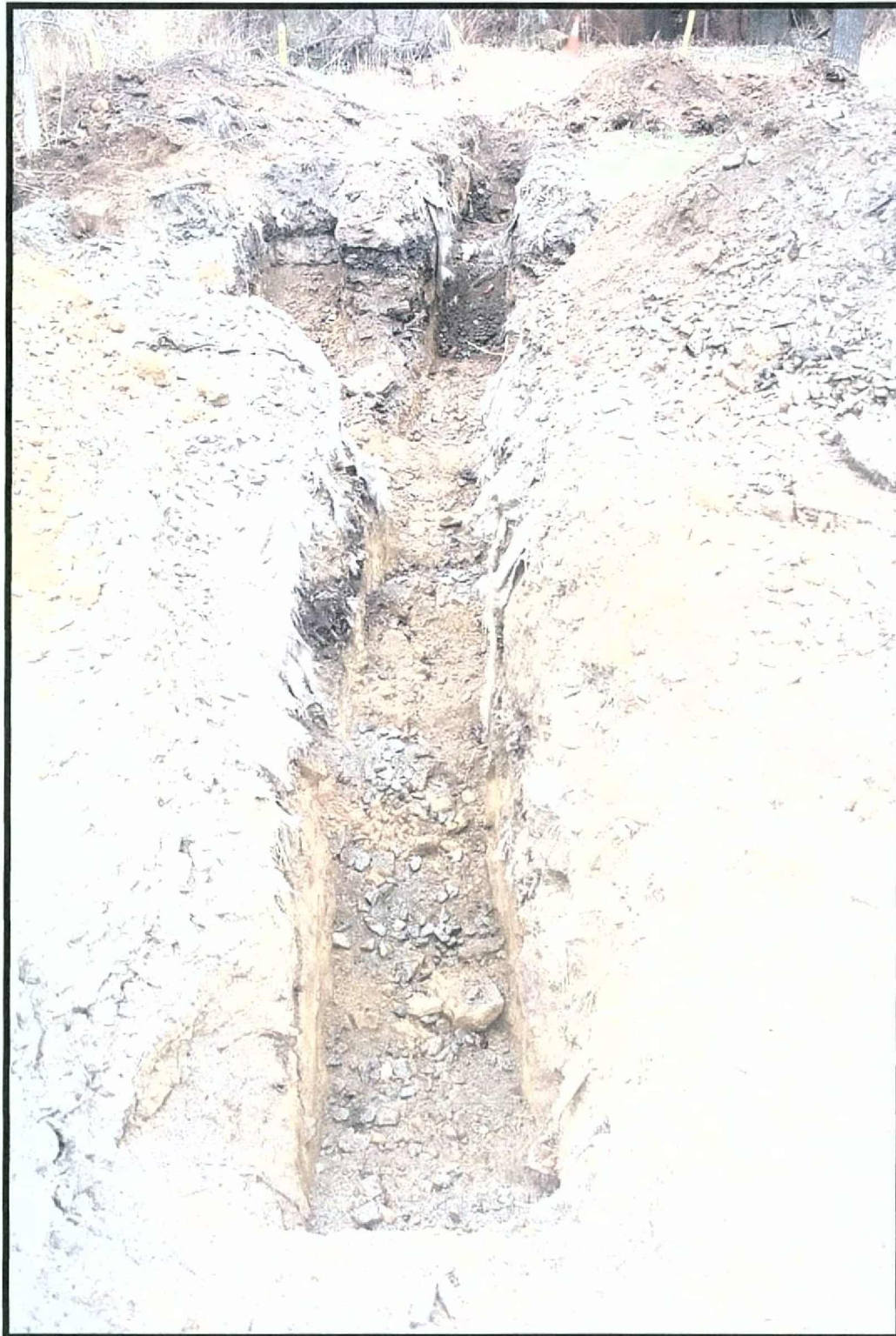
Photograph 6
Backhoe Trench 2 - Wall 3 and Adjacent Basement Floor
View West



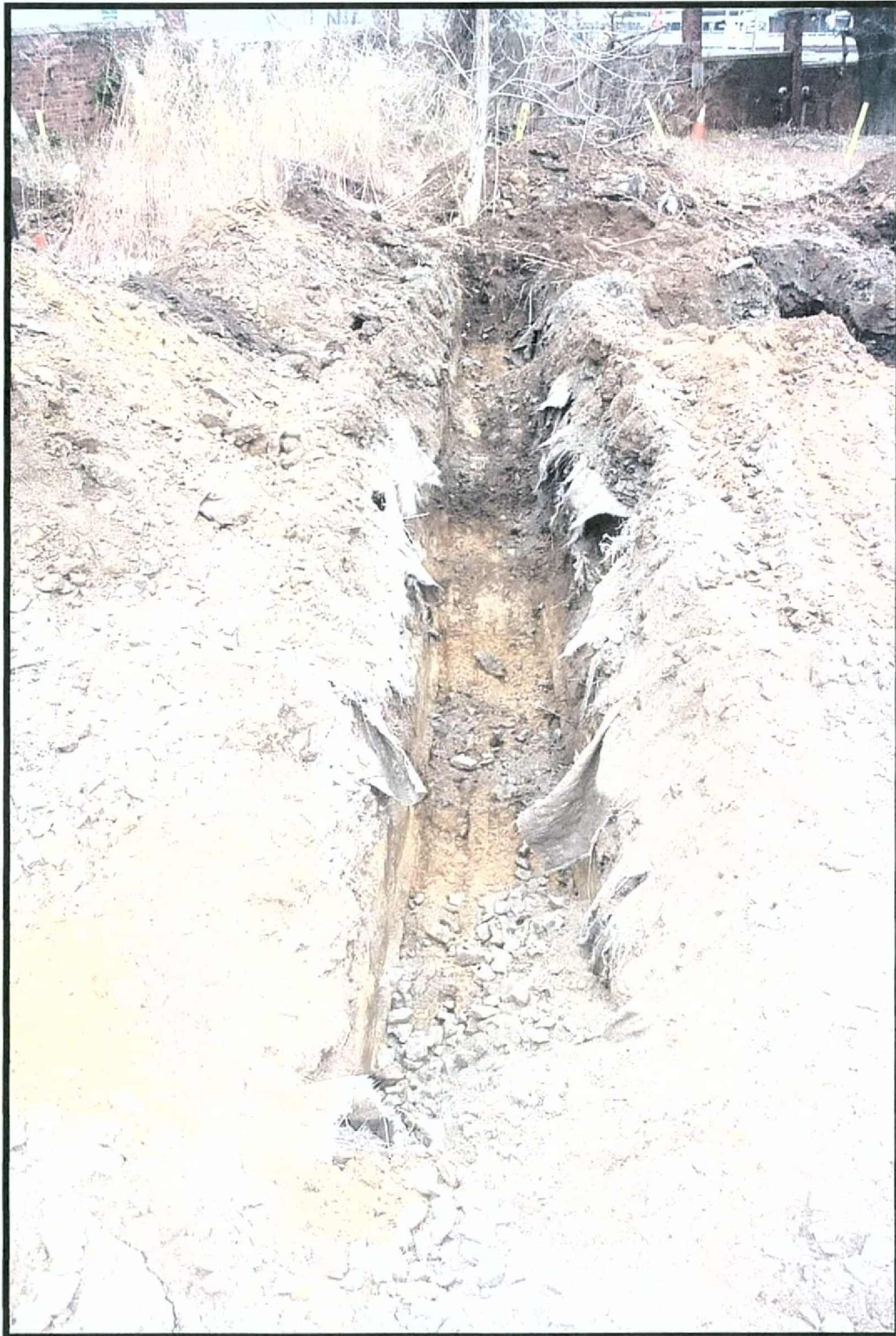
Photograph 7
Backhoe Trench 2 - Wall 3 Showing Intact Portion in Wall of Backhoe Trench
Demolition Debris/Fill Above Floor and Subsoil Adjacent to Outside of Wall
View South



Photograph 8
Backhoe Trench 2 - Northwest Corner of Building 1 - Walls 3 and 4 - Wall 4 Exposed in North Wall of Backhoe Trench
View Northwest



Photograph 9
Backhoe Trench 3 - View North From Southern End of Trench



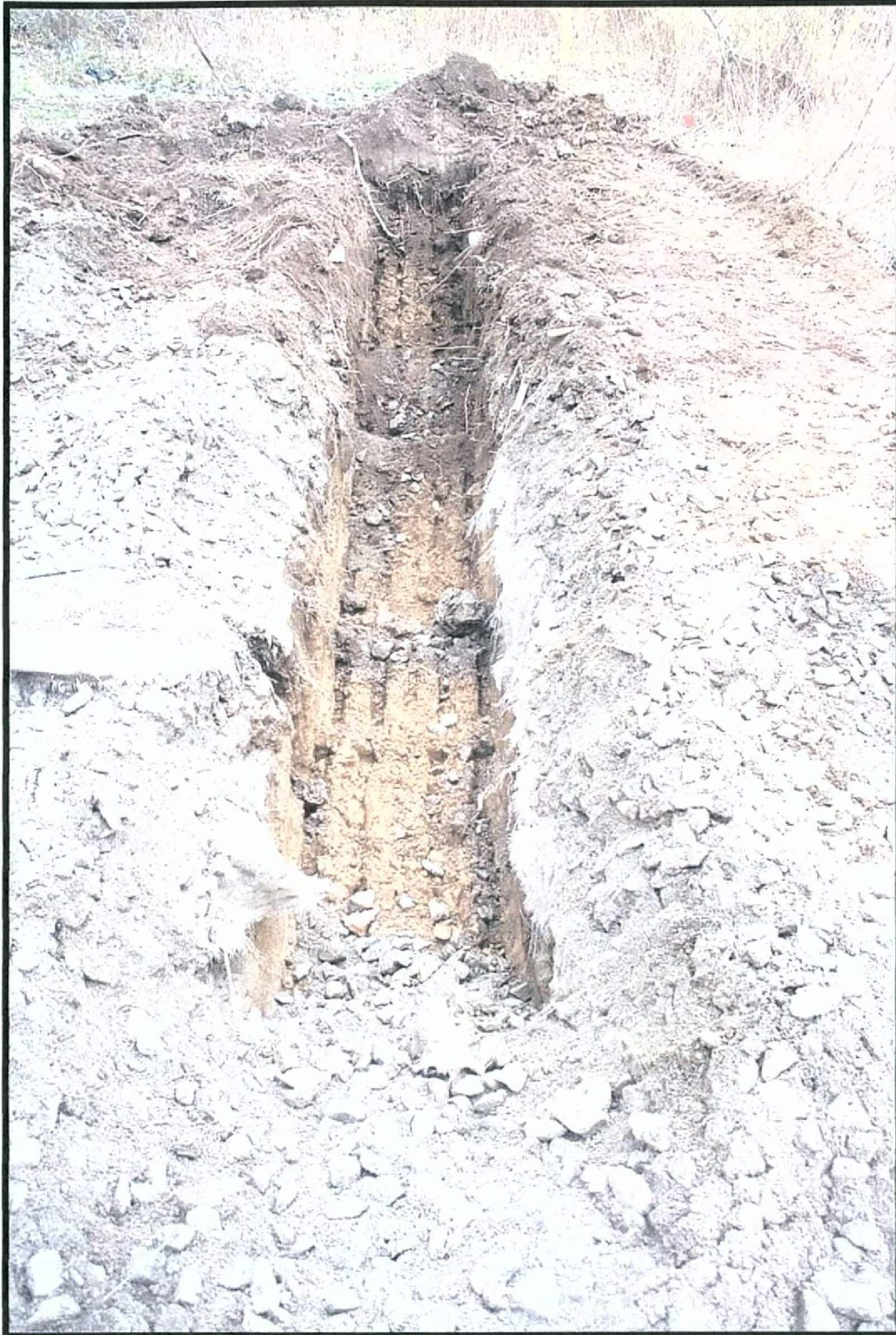
Photograph 10
Backhoe Trench 3a - View North From Southern End of Trench



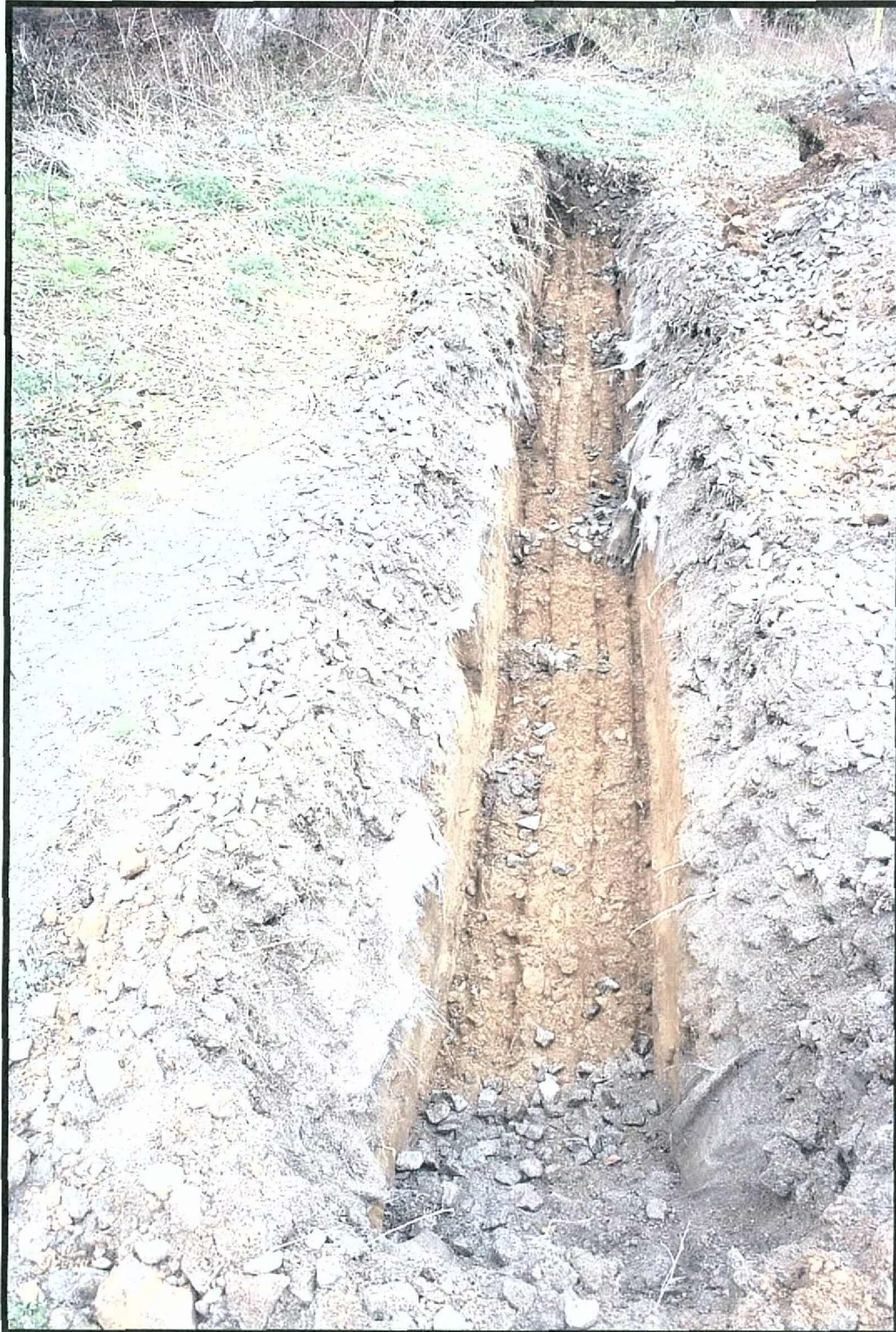
Photograph 11
Backhoe Trench 4 - View North From Southern End of Trench



Photograph 12
Backhoe Trench 5 - View North From Southern End of Trench



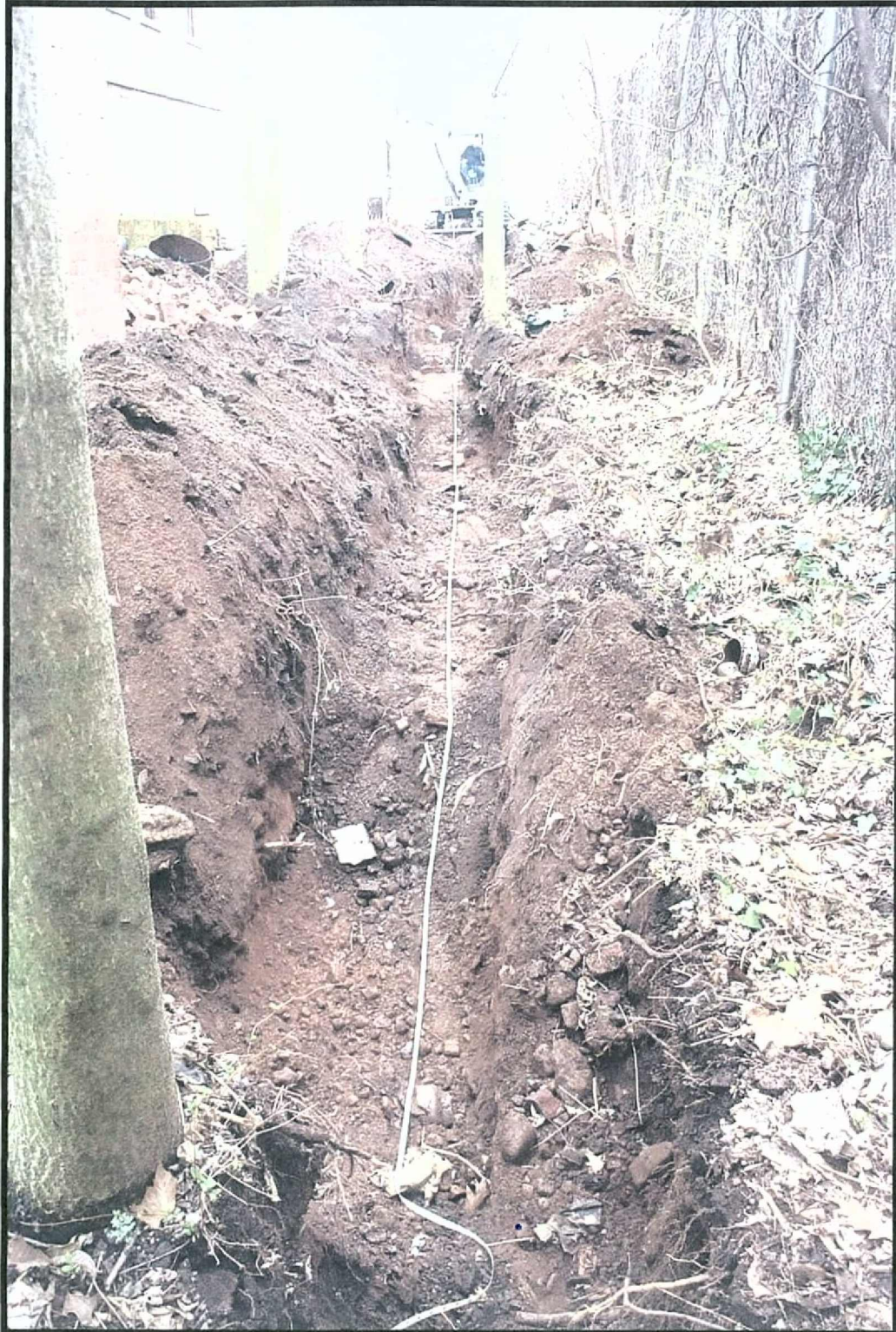
Photograph 13
Backhoe Trench 5a - View North From Southern End of Trench



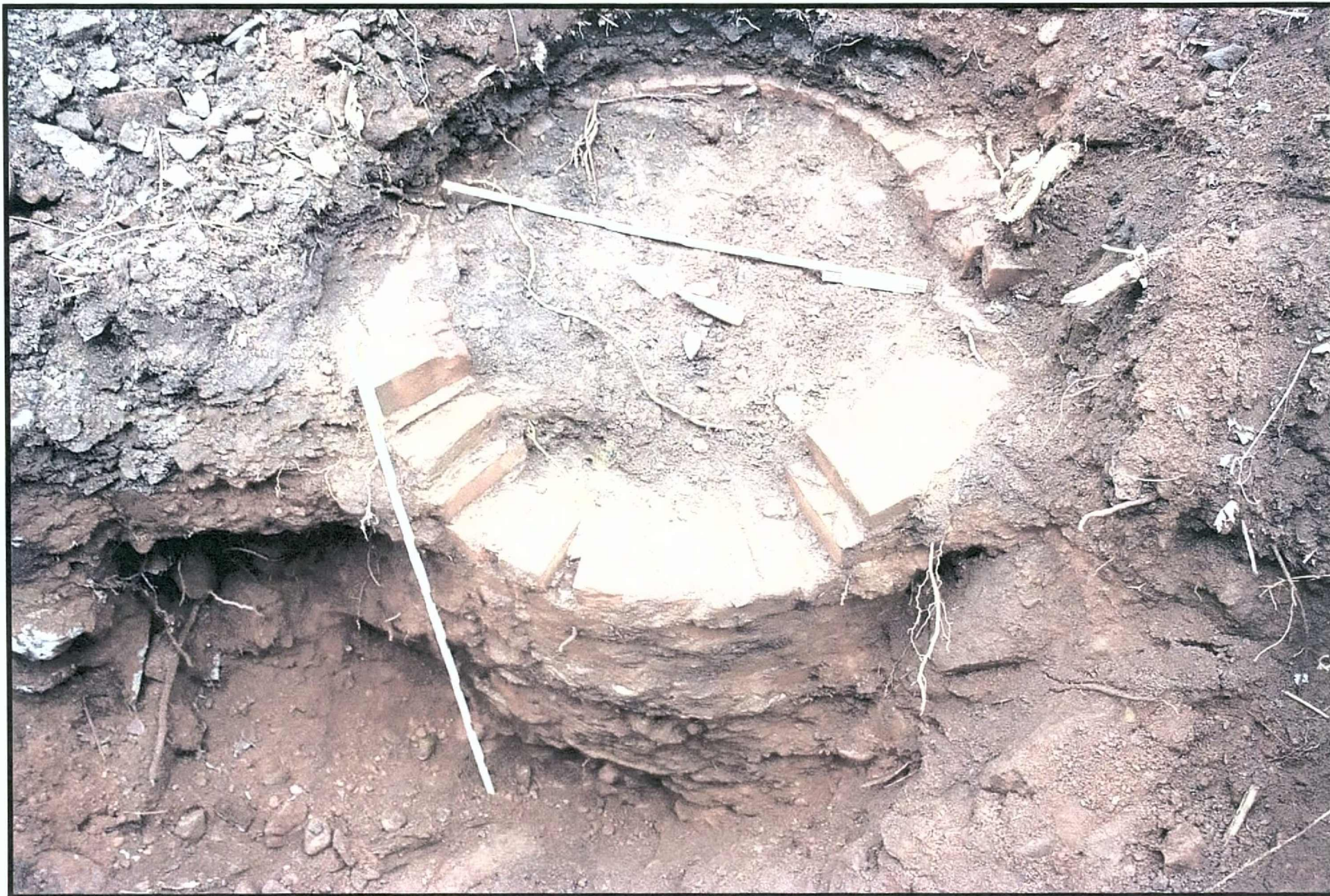
Photograph 14
Backhoe Trench 6 - View North From Southern End of Trench



Photograph 15
Backhoe Trench 7 - Southern Portion - Rear of Building 8
View North



Photograph 16
Backhoe Trench 7 - Northern Portion - Rear of Building 8
View South



Photograph 17

Feature 1 Exposed Adjacent to East Wall of BHTR7

**Note Metal Pipe on Surface of Feature Top/Center and Ceramic Pipe Adjacent to Feature in Wall of Trench at Left/Center
View Northeast**



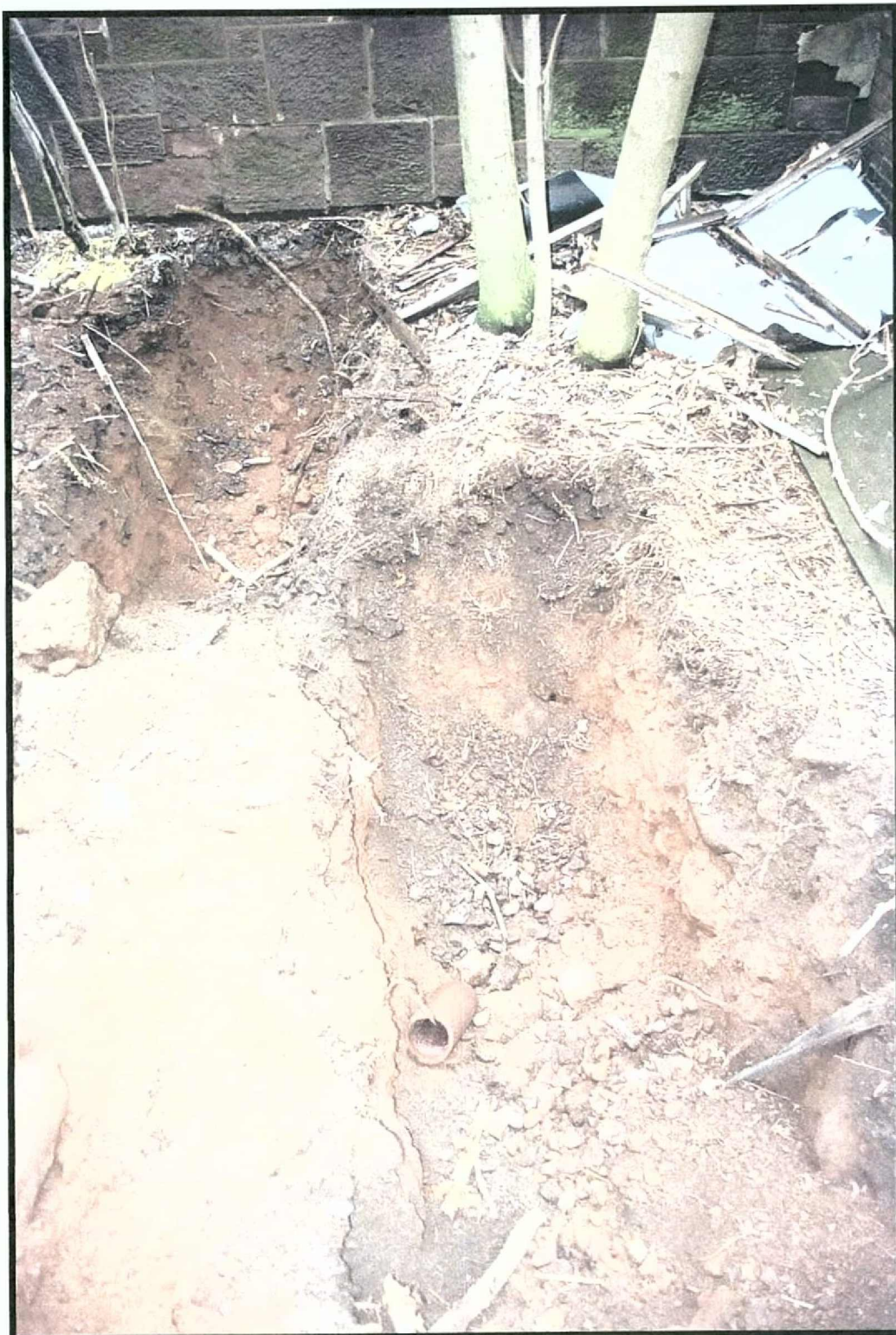
Photograph 18
Feature 1 After Excavation of Unit A
View Southeast



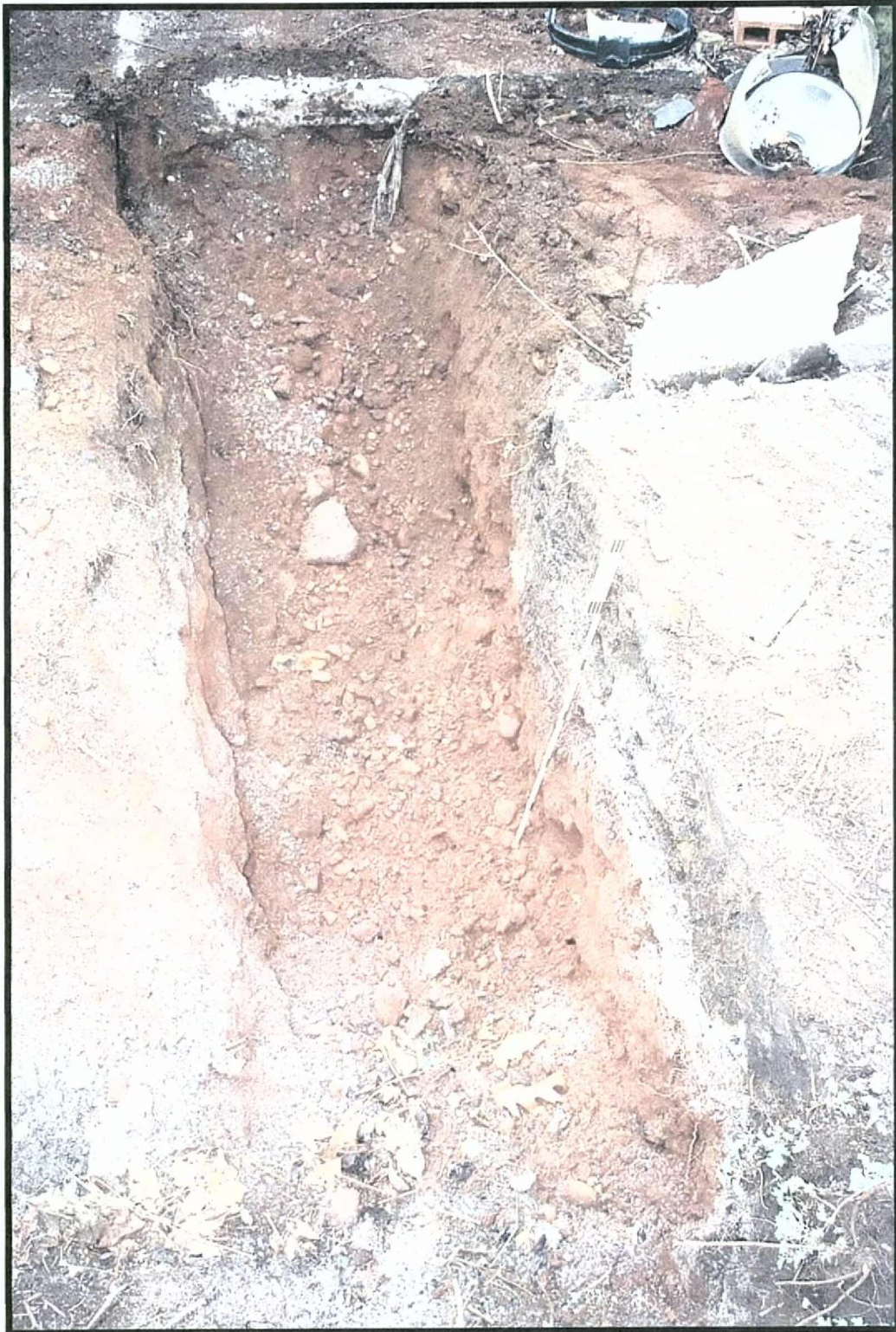
Photograph 19
Unit A Profile
View East



Photograph 20
Unit A Profile - Detail of Lower Portion
View East



Photograph 21
Backhoe Trench 7a
View East



Photograph 22
Backhoe Trench 8 - Southwest Corner Building 8
View North



Photograph 23
Backhoe Trench 9 - Southeast Corner Building 8
View Southwest



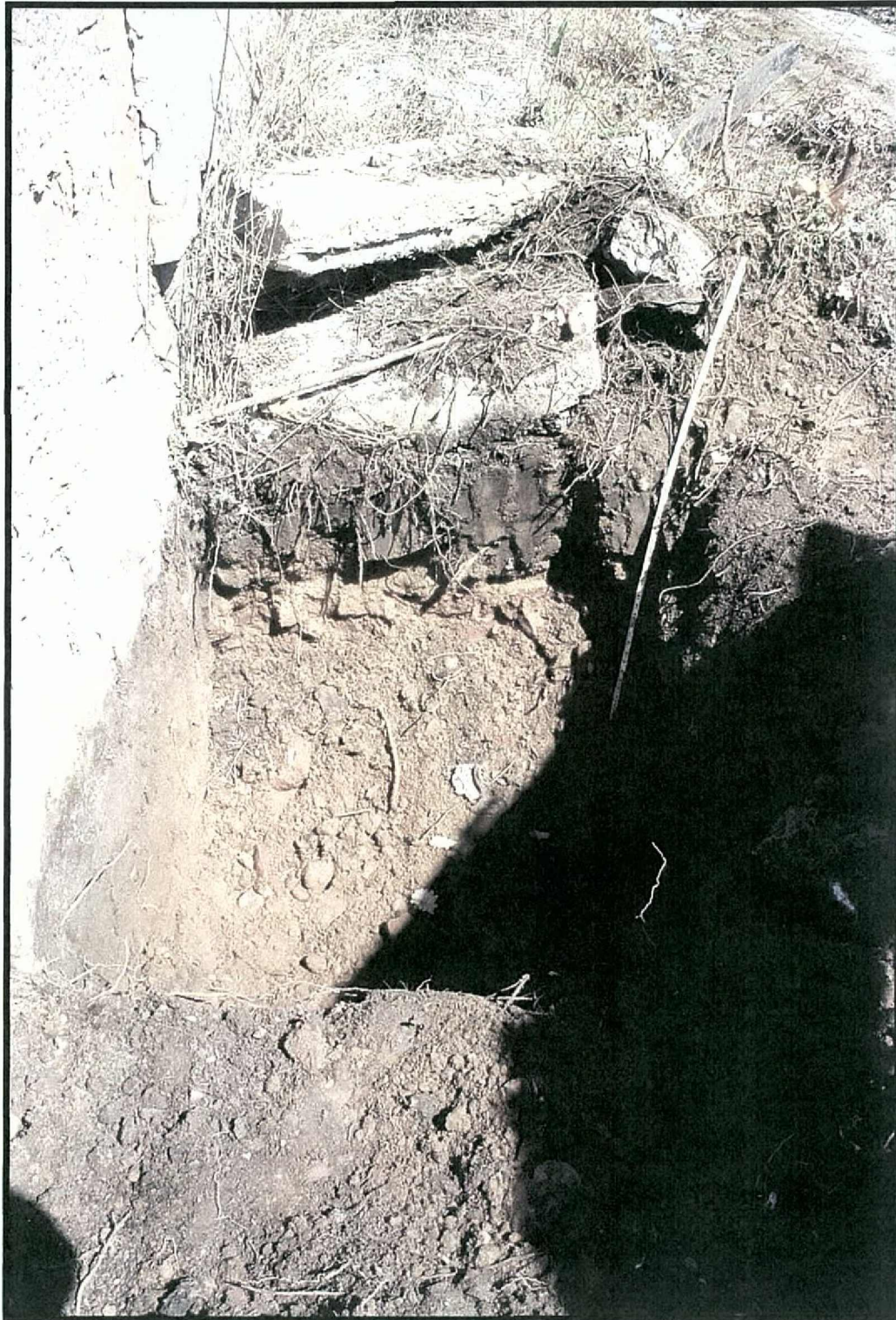
Photograph 24
Backhoe Trench 10 - Northeast Corner Building 8
View North



Photograph 25
Backhoe Trench 11 - Northwest Corner Building 6
View East



Photograph 26
Backhoe Trench 11 - Northwest Corner Building 6 - Detail of Exposed Brick Walls
View Southeast



Photograph 27
Backhoe Trench 12 - Southeast Corner Building 6
View North



Photograph 28

**Courtyard Between Buildings 7 and 8 Showing Portion of Large Concrete Slab Exposed After Removal of Bituminous Pavement
View West**

APPENDIX A

SHOVEL TEST AND UNIT A STRATIGRAPHY AND ARTIFACT INVENTORY

SHOVEL TEST 1

Str. Depth # (inches)	Description	Cultural Materials
1 0-6	Dark Gray/Brown Sand with Gravel (Not Screened)	None
2 6-8	Dark Gray/Brown Sand (Not Screened)	None
3 8-13	Pinkish Bray Sand with Gravel (Not Screened - Geotextile Fabric at Base of Test @ 13")	None

SHOVEL TEST 2

Str. Depth # (inches)	Description	Cultural Materials
1 0-10½	Gray Silty Sand with Gravel (Not Screened -Geotextile Fabric at Base of Test @ 10½")	None

SHOVEL TEST 3

Str. Depth # (inches)	Description	Cultural Materials
1 0-7	Dark Brown Sandy Silt	1 pc. undecorated (plain) whiteware 1 pc. clear, curved glass 1 pc. cement, wt.: 24.8 grams 3 pcs. coal, wt.: 15.7 grams Fragment from Aluminum Beer Can (discarded in field)
2 7-14	Dark Gray/Brown Sandy Silt	1 pc. undecorated (plain) whiteware 1 pc. milk glass 1 pc. red brick, wt.: 14.3 grams 1 g. pc. Red Brick (discarded in field) 7 pcs. coal, wt.: 11.3 grams 2 pcs. slag, wt.: 9.8 grams 1 pc. oyster shell, wt.: 1.9 grams
3 14-20	Dark Gray/Brown Sandy Silt with Yellow/Brown Mottling	3 pcs. red brick, 7.8 grams 2 pcs. coal, wt.: 3.1 grams 1 pc. slag, wt.: 4.1 grams
4 20-23	Black/Gray Sandy Silt with some Yellow/Brown Mottling	1 pc. green tinted, flat glass 1 pc. coal, wt.: 0.9 grams 1 pc. oyster shell (complete half of valve), wt.: 28.6 grams

5	23-30	Yellow/Brown Sandy Silt	None
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SHOVEL TEST 4

Str. Depth # (inches)	Description	Cultural Materials
1 0-10	Medium Brown Sandy Silt	1 large concrete block -12"x6"x6" (discarded in field)
2 10-16	Light Gray Tan Sand and	6 pcs curved, green tinted glass 4 pcs. coal, wt.: 18.9 grams
3 16-20	Tan Brown Sandy Silt	3 pcs. red brick, wt.: 7.3 grams 2 pcs. cut wood, wt.: 8.3 grams
4 20-21	Orange/Brown Sandy Silt with Tan/Brown Mottling	None
5 23-30	Orange/Brown Sandy Silt	None

SHOVEL TEST 5

Str. Depth # (inches)	Description	Cultural Materials
1 0-8	Dark Brown Sandy Silt	1 pc. unglazed redware 1 pc. cement, wt.: 45.3 grams 3 pcs. coal, wt.: 6.7 grams 1 pc. slag, wt.: 4.9 grams
2 8-16	Brown Sandy Silt	2 pcs. clear, flat glass 3 pcs. coal, wt.: 16.4 grams
3 16-20	Brown Clayey Silt	2 pcs. undecorated (plain) whiteware 1 pc. clear, curved glass 2 pcs. oxidized metal, wt.: 10.8 grams 2 pcs. red brick, wt.: 27.5 grams 2 pcs. slag, wt.: 4.1 grams
4 20-22	Brown Sandy Silt with Yellow/Brown Mottling	5 pcs. coal, wt.: 8.7 grams 1 pc. green plastic
5 23-30	Yellow/Brown Sandy Silt	None

SHOVEL TEST 6

Str. Depth # (inches)	Description	Cultural Materials
1 0-7½	Brown Clayey Silt with Orange/Brown Mottling	1 pc. undecorated (plain) whiteware 2 pcs. amber tinted bottle glass 1 pc. milk glass 4 pcs. green tinted flat glass 1 pc. clear, curved glass 1 pc. red brick, wt.: 2.1 grams 2 pcs. slate, wt.: 3.7 grams 5 pcs. coal, wt.: 11.4 grams 2 pcs. slag, wt.: 4.7 grams
2 7½-9	Dark Gray/Black Silty Sand with Coal and Cinder	2 pcs. red brick, wt.: 8.7 grams 10 pcs. slag, wt.: 22.3 grams Additional pcs. coal/cinder discarded in field
3 9-15	Gray/Brown Sandy Silt	1 pc. clear, curved glass 2 wire nails 3 pcs. red brick, wt.: 16.4 grams 27 pcs. slag, wt.: 23.1 grams 10 pcs. oyster shell, wt.: 11.2 grams
4 15-16	Orange/Brown Clayey Silt with Gray/Brown Mottling	None
5 16-22	Orange/Brown Clayey Silt	None

SHOVEL TEST 7

Str. Depth # (inches)	Description	Cultural Materials
1 0-2	Dark Brown Sandy Silt	Pcs. coal (discarded in field) Pcs. brick (discarded in field)
2 2-7	Dark Gray/Brown Sandy Silt	Pcs. coal (discarded in field) Pcs. brick (discarded in field)
3 7-12	Tan Sand	None
4 12-20	Very Compact Light Brown Sandy Silt Mixed with Dark/Brown Sandy Silt with Rocks	Pcs. coal (discarded in field) Pcs brick (discarded in field)

SHOVEL TEST 8

Str. Depth # (inches)	Description	Cultural Materials
1 0-7	Brown Clayey Silt with Orange/Brown Mottling	1 pc. undecorated (plain) whiteware 3 pcs. clear, flat glass 1 pc. amber bottle glass 3 pcs. molded, green tinted window glass 1 pc. lead, wt.: 12.3 grams 4 pcs. red brick, wt.: 14.3 grams 1 pc. concrete, wt.: 18.7 grams 1 pc. clam shell, wt.: 4.1 grams
2 7-9	Orange/Brown Sandy Silt with Dark Brown Mottling and	3 pcs. clear, flat glass 2 pcs. red brick, wt.: 2.9 grams 1 pc. slag, wt.: 2.1 grams
3a 9-10	Dark Brown Sandy Clayey Silt	
3b 10-16	Dark Brown Sandy Clayey Silt and	1 pc. undecorated (plain) whiteware 8 pcs. red brick, wt.: 12.2 grams
4 16-19	Dark Brown Sandy Clayey Silt with Orange/Brown Mottling	2 pcs. coal, wt.: 1.3 grams 18 pcs. slag, wt.: 5.2 grams
5 19-24	Orange/Brown Sandy Silt	None

SHOVEL TEST 9

Str. Depth # (inches)	Description	Cultural Materials
1 0-2	Dark Brown Sandy Silt	1 pc. clear, molded glass bottle base 2 pcs. red brick, wt.: 21.3 grams 1 pc. coal, wt.: 1.2 grams
2 2-7	Dark Gray/Brown Sandy Silt	1 pc. clear, flat glass 1 pc. green, bottle glass 2 pcs. red brick, wt.: 3.5 grams 4 pcs. coal, wt.: 3.6 grams 2 pcs. white plastic
3 7-14	Dark Gray/Brown Sandy Silt with Yellow/Brown Mottling	None
4 14-18	Yellow/Brown Clayey Silt	None

SHOVEL TEST 10

Str. Depth # (inches)	Description	Cultural Materials
1 0-3½	Dark Brown Sandy Silt with Gravel	1 pc. clear flat glass 1 pc. clear curved lamp glass 3 pcs. green tinted flat glass 2 pcs. red brick, wt.: 2.3 grams 1 pc. coal, wt.: 1.3 grams 1 pc. slag, wt.: 1.2 grams
2 3½-8½	Dark Gray Sandy Silt with Gravel	1 pc. clear, flat glass 2 pcs. asphalt, wt.: 45.7 grams 4 pcs. coal, wt.: 6.7 grams 2 pcs. slag, wt.: 2.2 grams 1 pc. oyster shell, wt.: 0.9 grams
3 8½-14	Red/Brown Silty Sand with Rocks	3 pcs. concrete, wt.: 79.8 grams 1 pc. cut slate, wt.: 34.6 grams 3 pcs. red brick, wt.: 4.6 grams Large pc. Brick (discarded in field)
4 14-20	Mixed Red/Brown and Dark Gray Sandy Silt with Rocks and Concrete Ceramic Pipe at base of Test	None

SHOVEL TEST 11

Str. Depth # (inches)	Description	Cultural Materials
1 0-4	Dark Brown Sandy Silt with Gravel	3 pcs. clear, flat glass 1 pc. green bottle glass 2 pcs. cellophane 1 pc. green plastic 1 pc. red brick, wt.: 1.2 grams 1 pc. white plastic Pcs. Coal/Cinder/Slag (discarded in field)
2 4-7	Dark Gray/Brown Sandy Silt with Gravel	2 pcs green-tinted, flat glass 1 pc. green shingle, wt.: 10.4 grams 1 pc. coal, wt.: 9.9 grams 1 pc. mortar, wt.: 2.1 grams 1 pc. cellophane Pcs. Coal/Cinder/Slag (discarded in field)
3 7-13	Mixed Light Brown, Gray/Brown, Rust Red/Brown and Medium Brown Sandy Silt with Small Rocks	1 pc. undecorated (plain) whiteware 1 pc. clear, flat glass 4 pcs. green tinted, flat glass 1 pcs. cement, wt.: 10.4 grams 1 pc. slag, wt.: 4.7 grams

1 pc. red brick, wt.: 2.1 grams
Large pc. Brick (discarded in field)

4 13-23 Red/Brown Sandy Silt with some Pebbles and Small Rocks None

SHOVEL TEST 11a (Extension of ST 11 to West Approximately 1½ Feet)

Str. Depth # (inches)	Description	Cultural Materials
1 0-12	Miscellaneous Fill (Ceramic Pipe at 12" at base of Extension)	Not Screened

SHOVEL TEST 12

Str. Depth # (inches)	Description	Cultural Materials
1 0-5	Loose Dark Brown Silty Sand	8 pcs. green tinted flat window glass 2 pc. clear, curved glass 4 pcs. green colored shingle, wt.: 25.8 grams 2 pcs. cement, wt.: 40.3 grams 2 pcs. slate, wt.: 15.4 grams 1 pc. plaster board
2 5-10	Mixed Orange/Brown and Dark Brown Silty Sand (Trench Fill)	1 pc. cement, wt.: 26.7 grams 4 pc. clear, flat glass 2 pcs. red brick, wt.: 7.9 grams
3 10-16	Mixed Trench Fill (East Side of Test) and Red/Brown Silty Sand (West Side of Test) Ceramic Pipe in East Wall of Test - Top of Pipe at 12"	

SHOVEL TEST 13

Str. Depth # (inches)	Description	Cultural Materials
1 0-3	Dark Brown Sandy Silt with Gravel	2 pcs. clear, flat window glass Pcs. Coal/Cinder/Slag (discarded in field)
2 3-10	Dark Gray Sandy Silt with Gravel	1 pc. clear, flat glass 1 pc. clear curved, glass Pcs. Coal/Cinder/Slag (discarded in field)

3	10-12	Gray Sand	None
4	14-23	Red/Brown Sandy Silt with Pebbles	None

SHOVEL TEST 14

Str. Depth # (inches)	Description	Cultural Materials
1 0-3	Dark Brown Sandy Silt with Gravel and	1 pc. undecorated (plain) porcelain 1 pc. undecorated (plain) whiteware
2 3-7	Dark Gray Sandy Silt with Gravel	8 pcs. clear, flat glass 1 pc. clear lamp glass 2 pcs. molded window glass 3 pcs. asphalt, wt.: 20.3 grams
3 7-25	Mixed Red/Brown, Brown and Gray Sandy Silt with Rocks (Rock at Base of Test Prevented Further Excavation)	2 pcs. clear, flat glass 5 pcs. red brick, wt.: 35.2 grams Lg. Pc. Brick (discarded in Field) 6 pcs. slag, wt.: 26.3 grams 1 pc. charcoal, wt.: 10.5 grams

UNIT A

Stratum: I

Opening Depth (in.): 3.0

Closing Depth (in.): 9.0/12.5

Stratum Description: Dark Gray/Black Sandy Silt with Some Yellow/Brown Mottling and Pebbles

Quantity	Artifact	Description
9	oxidized wire nails	
2	fragments oxidized metal	wt.: 51.2 grams
1	fragment amber tinted bottle glass	
1	fragment clear flat glass	
10	fragments red brick	wt.: 89.2 grams
7	fragments mortar/cement	wt.: 155.2 grams
1	fragment cut stone	wt.: 10.9 grams
1	fragment cut gray black colored slate	wt.: 11.7 grams
7	fragments oyster shell	wt.: 29.4 grams
7	fragments coal	wt.: 19.7 grams
9	fragments slag	wt.: 22.5 grams
1	fragment white plastic	
1	fragment Styrofoam	

Stratum: IIa

Opening Depth (in.): 9.0/12.5

Closing Depth (in.): 17.0/21.0

Stratum Description: Light Gray/Brown Sandy Silt with some Yellow/Brown Mottling

Quantity	Artifact	Description
3	fragments green tinted window glass	
1	molded rim, clear bottle glass fragment – twist off grooves present; possibly from mason jar	
11	oxidized wire nails	
6	fragments oxidized metal	wt.: 487.7 grams
12	fragments red brick	wt.: 116.7 grams
1	fragment buff-colored fire brick	wt.: 32.1 grams
10	fragments mortar/cement	wt.: 226.1 grams
19	fragments coal	wt.: 102.6 grams
13	fragments slag	wt.: 227.5 grams
1	fragment cut gray black slate	wt.: 37.6 grams
1	fragment cut red slate	wt.: 28.9 grams
5	oyster shell fragments	wt.: 12.8 grams
1	fragment soft shell clam	

Stratum: IIb

Opening Depth (in.): 17.0/21.0

Closing Depth (in.): 27.0/28.5

Stratum Description: Light Gray/Brown Sandy Silt with some Yellow/Brown Mottling

Quantity	Artifact	Description
1	fragment clear flat glass	
2	fragments green tinted window glass	
8	fragments oxidized nails	
4	fragments oxidized metal	wt.: 543.8 grams
7	fragments red brick	wt.: 576 grams
6	fragments mortar/cement	wt.: 652.8 grams
8	gray/black slate fragments	wt.: 11.2 grams
6	fragments coal	wt.: 56.5 grams
4	fragments slag	wt.: 45.2 grams
2	fragments soft shell clam	wt.: 4.3 grams
2	fragments oyster shell	wt.: 9.8 grams

Stratum: III

Opening Depth (in.): 27.0/28.5

Closing Depth (in.): 43.0

Stratum Description: Gray/Black Sand with Some Silt

Quantity	Artifact	Description
1	fragment buff bodied earthenware – one side red brown glazed; other side green/light green glazed	
1	fragment hard paste porcelain electric insulator - broken lower quarter portion of cylindrical-shaped item; remaining part of tube-like cavity extends through artifact	
496	fragments green tinted plate/window glass	
15	wire nails	
1	metal (tin) elongated, rectangular shaped metal strap	
25	fragments oxidized sheet metal	wt.: 1,350.7 grams
5	fragments oxidized metal	wt.: 321.4 grams
7	fragments steel mesh/screening – 1/64 th inch mesh size	
42	fragments mortar/cement	wt.: 698.6 grams
1	gray black slate 11 x 8 x 0.25 inches in size; wt.: 1,589.1 grams	
5	fragments red slate	wt.: 16.7 grams
12	fragments red brick	wt.: 765.7 grams
10	pcs. gray and white hardened putty/caulking-like substance	wt.: 78.5 grams
18	fragments cut wood	wt.: 429.7 grams
5	fragments deteriorated leather – clothing items	

Stratum: IV

Opening Depth (in.): 43.0

Closing Depth (in.): 46.0

Stratum Description: Coal Dust and Small Coal Fragments in Black Sandy Matrix with Gravel
(Mortar/Concrete Floor of Feature at Base of Stratum)

Quantity	Artifact	Description
25	fragments green tinted window glass	
3	rim fragments buff bodied unglazed earthenware	
3	fragments oxidized metal	wt.: 12.2 grams
2	fragments mortar/cement	wt.: 21.6 grams
3	fragments cut wood	wt.: 25.4 grams
1	fragment cut wooden twig	wt.: 8.9 grams
5	fragments coal	wt.: 17.6 grams
1	fragment slag	wt.: 7.6 grams